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# Dr. *HALLEY*'s

# ASTRONOMICAL TABLES.

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EDMUNDUS HALLEIUS R.S.S.

Astronomus Regius et Geometriæ Professor Savilianus.

# EDMUNDI HALLEII

ASTRONOMI DUM VIVERET

REGII

# TABULÆ

# ASTRONOMICÆ.

ACCEDUNT

DE USU TABULARUM PRÆCEPTA.

*LONDINI*

Apud GULIELMUM INNYS.

MDCCXLIX.

ADAMS 839

# ASTRONOMICAL TABLES

WITH

# PRECEPTS

BOTH IN

ENGLISH and LATIN

For computing the Places of the

SUN, MOON, PLANETS, and COMETS.

BY

*EDMUND HALLEY*, L. L. D.

Late Regius Profeſſor of ASTRONOMY at *Greenwich*.

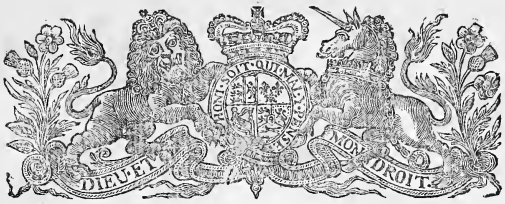


*LONDON*,

Printed for WILLIAM INNYS in *Pater-noſter Row*.

MDCCLII.






*GEORGE R.*

GEORGE the Second, by the Grace of God, King of Great Britain, France, and Ireland, Defender of the Faith, &c. To all to whom theſe Preſents ſhall come, **Greeting:** Whereas Our Truſty and Wellbeloved WILLIAM INNYS, of Our City of London, Bookſeller, hath, by his Petition, humbly repreſented unto Us, That he hath, at great Charge and Expence, been more than thirty Years printing a Book of Aſtronomical Tables, compoſed and written by Doctor *Edmund Halley*, Our late Regius Profeſſor of Aſtronomy, and Savilian Profeſſor of Geometry, in Our Univerſity of Oxford, intituled, *Edmundi Halleii Aſtronomi dum viveret Regii Tabulæ Aſtronomicæ. Accedunt de Uſu Tabularum Præcepta:* And that the ſole Right and Title of the Copy of the ſaid Book, is veſted in him, the ſaid WILLIAM INNYS, wherefore he hath moſt humbly beſought Us to grant him Our Royal Privilege and Licence, for the ſole Printing and Publiſhing the ſame, for the Term of fourteen Years. We, being willing to give all due Encouragement to Works which may tend to the Advancement of Learning, are graciouſly pleaſed to gratify him in his Requeſt; and do, therefore, by theſe Preſents, ſo far as it may be agreeable to the Statute in that Behalf made and provided, for Us, Our Heirs, and Succeſſors, give and grant unto him, the ſaid WILLIAM INNYS, his Executors, Adminiſtrators, and Aſſigns, Our Royal Licence for the ſole Printing and Publiſhing the ſaid Book, for the Term of fourteen Years, to be computed from the Date hereof; Strictly forbidding all Our Subjects, within Our Kingdoms and Dominions, to reprint the ſame, either in the like or in any other Volume or Volumes whatſoever; or, to import, buy, vend, utter, or diſtribute, any Copies thereof, reprinted, beyond the Seas, during the aforeſaid Term of fourteen Years, without the Conſent or Approbation of the ſaid WILLIAM INNYS, his Heirs, Executors, and Aſſigns, by Writing under his, or their, Hands and Seals, firſt had and obtained for that Purpoſe, as They, and every of Them, offending herein, will anſwer the contrary at Their Peril; Whereof the Commiſſioners and other Officers of Our Cuſtoms, the Maſter, Wardens, and Company of Stationers, are to take Notice, That due Obedience may be rendered to Our Pleaſure herein declared.

Given at Our Court at Kenſington, the Eighth Day of Auguſt, 1749, in the Twenty-third Year of Our Reign.

*By His Majeſty's Command,*

HOLLIS NEWCASTLE.

# PREFACE.

WE here offer to the Public the celebrated Dr. Halley's long expected Tables of the Sun and Planets, which were sent to the Press in the year 1717, and printed off in 1719. There wanted only Precepts for using them, and some few Tables commonly inserted in works of this kind, when in the year 1720 our Author being appointed Successor to Mr. Flamsteed in the Royal Observatory, laid aside the thoughts of publishing them so soon as he had intended, that he might compare the Lunar numbers with his own Observations, and thereby be enabled to publish a Table of their Errors at the same time. He had long earnestly wished to see somewhat of this kind done by others, that the quantities of such Equations of the Moon as are already known, might be more exactly determined, and such as are still unknown, discovered. And relying on the uncommon vigour of his constitution he undertook this laborious work himself in the 64th year of his age, and beyond all expectation compleated it.

When he first came to the Observatory he found it destitute of Instruments, for those which Mr. Flamsteed had used, being his own property were taken away by his Family: But in the year 1721 having fixed a Transit Instrument in the Meridian, he diligently observed the R. Ascensions of the Moon during the four following years, till the great Mural Quadrant was finished and put up at the public expence in the year 1725; whereby he was enabled to determine her Longitudes from observation. Hence in the Tables entitled, Lunæ Meridianæ &c. we find the Moon's observed Longitudes compared with the Tables from December 5, 1725, to the end.

Had our Author published these Tables himself, he would doubtless have given some account of the Observations he made use of for their construction; and perhaps might have shewn how to correct them in some places from his later Observations. This is not to be expected from us. We shall only apprize the Reader of some particulars, the better to enable him to form a true judgment of them.

Our Author made use chiefly of Mr. Flamsteed's Observations, which though taken with great care, and most faithfully entered in his Books, yet there were too few of the Sun to determine the Solar numbers with sufficient exactness: and Dr. Halley used frequently to complain of this deficiency. To this it is owing that he could not determine either the Species or Position of the Earth's Orbit exactly; much less could he discover any Equation to the motion of its Aphelion, or the other small Equations by which its Orbit is affected: For these are not to be found out, nor their quantities deter-

*mined, but by a long ſeries of the niceſt Obſervations. To this we may add that neither the Aberration of the Light of the fixt Stars, nor the Equation to the Preceſſion of the Equinoctial points, nor that of the Nutation of the Earth's Axis were at that time known; for the diſcovery of all which the world is obliged to the wonderful ſkill, diligence, and ſagacity of our great Aſtronomer the Reverend Dr.* Bradley, *F. R. S. Savilian Profeſſor of Aſtronomy in the Univerſity of* Oxford, *and our Author's moſt worthy Succeſſor in the Royal Obſervatory. Theſe Equations, though ſmall, are ſufficient to produce a ſenſible appearance of Error in good Obſervations, and had greatly perplexed Mr.* Flamſteed. *And as all Aſtronomy depends on a true knowledge of the Earth's motion in its Orbit, Errors in the Solar numbers cannot but produce Errors likewiſe in thoſe of the Planets.*

*Such as are ſenſible of the almoſt infinite number of Obſervations which muſt be examined and compared to determine the Quantities of the Lunar Equations, will be the beſt judges of the pains our Author muſt have taken in conſtructing his Tables of the Moon, and of his ſkill and contrivance therein. With what candor he purpoſed to have imparted them to the Public is manifeſt in that he never intended to offer them as perfect, rather chuſing to omit ſome Equations for whoſe determination he wanted proper Obſervations, and at the ſame time reſolving to publiſh what Errors he ſhould find in them from his own Obſervations.*

*Our Author in finding the R. Aſcenſion of the Moon by obſervation, made uſe of the Britannic Catalogue for the places of the Fixt Stars, in which ſome of them are ill determined; and if we had any hopes that his Obſervations would ever be made public it might be worth the while to give a liſt of thoſe Stars, with the quantities of their Errors, that the obſerved places of the Moon deduced from them might be corrected.*

*We wiſh our Author had printed his Obſervations, for the publication of aſtronomical Obſervations is of very great importance as they never become obſolete like Tables, but on the contrary the uſefulneſs of ſuch as are carefully made and faithfully delivered is greatly encreaſed by their antiquity. It were therefore much to be wiſhed that the Obſervations made at the Royal Obſervatory, were printed off from time to time at the public expence; for the more diligent the Obſerver is, the more is the Public concerned in the preſervation of his Labours, and the leſs ſuitable is the expence to the circumſtances of a private Perſon.*

*In the year* 1725 *Dr.* Halley *publiſhed ſome corrections of his Tables of* Mercury *in the Philoſophical Tranſactions* (N° 386) *where he determines the*

*the mean Longitude of that Planet at the commencement of the* Julian *Year* 1723 *to be* ♌ 19. 09. 31; *and finds its mean Motion in* 100 Julian *Years* 2°. 14°. 2'. 13", *and the diſtance of its aſcending Node from the firſt Star of* Aries 0°. 15'. 41".

*Our Author received the Tables of* Jupiter's *Satellites from the Reverend Dr.* Bradley *in the year* 1718. *They do not anſwer to the Obſervations at this time, which was not unforeſeen by their learned Author, as appears by his Notes.*

*The Synopſis of the Aſtronomy of Comets was printed off at the ſame time as the Tables.*

*The Tables entitled,* Lunæ Meridianæ &c. *were ſent to the Preſs at different times as the Author deduced them from his Obſervations.*

*We ſhall now inform the Reader what has been done in order to prepare this work for the Public.*

*There wanted convenient Tables of the mean Conjunctions of the Sun and Moon, a Table of Refractions, and another of the Longitudes and Latitudes of remarkable Places, all which we have inſerted in their proper order.*

*The Reverend Dr.* Bradley *very kindly favoured us with the Tables of the mean Conjunctions of the Sun and Moon, and that of the Lunar Periods, which were conſtructed in a very commodious form by that excellent Aſtronomer the late Reverend Mr.* Pound. *The Table of Lunar Periods is of uſe in finding the returns of Eclipſes, and therefore we have omitted Dr.* Halley's *Table of the Eclipſes which had happened in* 223 *Lunations from the year* 1701 *to* 1718 *with Equations which he had made for that purpoſe and called* [a] *the* Plinian *Period, both becauſe it is leſs accurate and after a few Periods elapſed becomes of little uſe. The Table of Refractions is the ſame our Author always uſed. The Places inſerted in the Table of Longitudes and Latitudes are chiefly ſuch as are remarkable either for antient Eclipſes or modern Obſervations: We wiſh the Obſervations from which the greater part of them are deduced were more to be depended on. We have retained the Elevation of the Pole at the Royal Obſervatory which Mr.* Flamſteed *and Dr.* Halley *uſed in their calculations, though it is ſomewhat too ſmall.*

*In the Precepts we have ſtrictly adhered to the method Dr.* Halley *obſerved in computing the Place of the Moon, that the Errors of computation might not differ from thoſe in the Tables entitled,* Lunæ Meridianæ &c. *For if the fourth Equation of the Moon be uſed after that of the*

[a] See *Phil.* Tranſ. N° 194. p. 535.

*Center, or that rough correction of the argument of the fourth Equation directed in the Margin of the last page of Sheet* (b,) *be neglected, the difference of Error may sometimes amount to half a Minute, which would make the Errors found in the Table of less use in correcting the computed Places.*

*And here it is proper to inform the Reader, that it appears from Dr.* Halley's *Papers, that both in computing the R. Ascension of the Moon's Limb, and in finding the Longitude of her Center from Observation, he constantly used the apparent instead of the true Semidiameter of the Moon; and consequently from the beginning of the Table* Lunæ Meridianæ &c. *to the latter end of the year* 1725 *from the New to the Full Moons, while the Western Limb was observed, the computed R. Ascensions of that Limb are set down too backward; and during the remainder of the Month while the Eastern Limb was observed, the computed R. Ascensions of that Limb are set down too forward: And from the year* 1725 *the Longitudes of the Moon's Center deduced from the observations of her Western Limb are set down too forward, and those from the observations of her Eastern Limb too backward. This Error is not considerable, and seldom exceeds a quarter of a Minute, therefore in common cases it may be neglected, for which reason we have taken no notice of it in the Precepts: But if any one shall undertake to correct the Moon's mean Motion, or to new model the Equations, it will be necessary to correct the Errors found in the Table by the Excess of the Moon's apparent Semidiameter in R. Ascension or Longitude, above her horizontal Semidiameter of the like denomination.*

*We have endeavoured to be as concise in the Precepts as possible, but for the sake of Mariners, have explained the method of finding the Longitude at Sea from Observations of the Moon, by several Examples.*

## ADVERTISEMENT.

The Author of the *Latin* Precepts having been desired to revise this Translation of them, hath thought fit to make some alterations and additions.

He desires the Reader will please to correct the following Errors in the *Latin*, which escaped his notice while it was printing off.

*Corrigenda in Præceptis Latinis.*

P. (b) 2. l. 22. *pro* 5. 24. 4. 40. *lege*, 5. 24. 4. 59. *ibid.* l. 26. *pro* distantia ☽ à ☉, *lege*, differentiâ. p. (c) l. 10. *dele*, maximæ. *ibid.* l. 15. *dele*, maximæ, *ibid.* l. 26. 27. *verba*, Tabulâ——ad distantiam Lunæ a Syzygiâ propiore, *litteris Romanis erant exprimenda.* p. (d) 4. l. 4. *pro* 5. 59. 47. *lege*, 4. 59. 47. p. (e) 1. l. 23. *pro* γ *lege* β. p. (e) 2. l. 26. *dele*, Orbitæ. p. (e) 3. l. 9. *dele* Orbitæ. p. (Qq 2) Aph. ♑ *pro* ♐ 12. *lege* ♐ 13. *ibid.* Nod. ♑ *pro* ♉ 14. *lege* ♉ 15.

Pre-

# Precepts for uſing the Tables.

## NOTE I.

### *Of aſtronomical Time.*

APPARENT time is reckoned from the paſſage of the Sun's Center over the Meridian of any Place to its return to the ſame; for in that interval of time is one natural day compleated. But theſe days being unequal to each other, the mean or equal motions of the Sun and Planets cannot well be adapted to them; therefore Aſtronomers have ſuppoſed a mean day, to the noon of which they ſet down the mean Places. This, in the following Precepts, we ſhall call the Mean Noon. If then, the Place of the Sun or a Planet be ſought, for any given inſtant of apparent time, the mean time anſwering thereto muſt be found by the Tables of the Equations of Time (C c 3) and the mean place of the Sun or Planet muſt be ſought to that mean time.

## NOTE II.

### *Of the Tables of Epochs.*

The mean Places of the Sun and Planets in the Tables of Epochs are to the Mean Noon of the laſt day of the preceding *Julian* year. Thus the Sun's Mean Anomaly in the Table of Epochs anſwering to the year 1722, is his Mean Anomaly to that fictitious Noon on *December* 31, 1721. The Tables are adapted to the Time of the Meridian of the Royal Obſervatory at *Greenwich*.

## PRECEPTS FOR COMPUTING THE PLACE OF THE SUN.

### *To find the Sun's true Longitude for any given time.*

1. From the Tables entitled, *Epochæ mediorum motuum Solis & primæ Stellæ Arietis*, (D d &c.) and *Motus Anomaliæ mediæ Solis &c.* (D d 3 &c.) collect the Sun's Mean Anomaly and the place of his Apogee for the given year, day, and time of the day.

2. The

2. To the Sun's mean Anomaly for the given time add the Longitude of his Apogee, the Sum will be the Sun's Mean Longitude.

3. In *Tabula Æquationum Solis* (E c 3) find the Equation corresponding to the Sun's Mean Anomaly, which according to its Title being added to, or subtracted from, the Sun's Mean Longitude, will give his true Longitude to the mean time of the Tables.

4. If the given Time be apparent, seek the Equation corresponding to the Sun's true Longitude in the first of the Tables entitled, *Tabulæ Æquationis Temporis*, (C c 3) and that corresponding to his mean Anomaly in the other Table in the same page. Their sum, if both be to be added or subtracted; or their difference, if one be to be added and the other subtracted, will be the absolute Equation of Time, by which the given apparent time must be encreased or diminished to reduce it to Mean. And the Sun's true Longitude found over again to this mean time will be his true Longitude at the apparent time given. Or if the Sun's true Longitude first found be corrected by adding or subtracting an Arc of his mean Motion answering to the absolute Equation of time, it will give his true Longitude for the apparent time very nearly.

*Tabula Æquationis Temporis compositæ* is a Table of the Absolute Equation of Time answering to the Sun's true Longitude, but this Table is not perpetual on account of the Motion of the Sun's Apogee.

## EXAMPLE.

*Required the true Longitude of the Sun on the apparent Noon of the 20th of* January, 1722.

In the Table *Epochæ mediorum motuum &c.* the Sun's Mean Anomaly to the Year 1722 is $6^s.\ 12^o.\ 37'.\ 56''$, and the place of his Apogee ♋ $8^o.\ 0'.\ 24''$, or $3^s.\ 8^o.\ 0'.\ 24''$. to these add the motion of his Mean Anomaly to *Jan.* 20, $0^s.\ 19^o.\ 42'.\ 43''$, and that of his Apogee (whose monthly motion is found at the bottom of each month) $3''$, their sums will be $7^s.\ 2^o.\ 20'.\ 39''$ the Sun's Mean Anomaly, and $3^s.\ 8^o.\ 0'.\ 27''$. the place of his Apogee on the Mean Noon of the 20th of *January* 1722. And these added together give $10^s.\ 10^o.\ 21'.\ 6''$ for the Sun's mean Longitude at that time. The Equation of the Center in *Tabula Æquationum Solis* to $7^s.\ 2^o$ of Mean Anomaly is $1^o.\ 2'.\ 47''$, that to $7^s.\ 3^o$ is $1^o.\ 4'.\ 31''$, their difference $1'.\ 44''$; and as while the Sun's M. Anomaly encreases, the Equation encreases likewise, add $36''$, the proportional part of this difference, to the lesser Equation $1^o.\ 2'.\ 47''$, it will give $1^o.\ 3'.\ 23''$ for the Equation to the M. Anomaly $7^s.\ 2^o.\ 20'.\ 39''$, which added (as the Table directs) to the mean Longitude of the Sun gives ♒ $11^o.\ 24'.\ 29''$ the Sun's true Longitude to the mean Time of the Tables.

Seek now the Equation of Time, and that part of it which depends on the Sun's Place ♒ $11^o.\ 24'$ will be found 9 m. 52 s. and the other part answering to his M. Anomaly $7^s.\ 2^o.\ 20'.$ 4 m. 13 s. which according to the Tables are both additive, therefore their sum 14 m. 5 s. is the absolute Equation of Time, which added to the apparent time given will convert it into Mean. Therefore to obtain the Sun's true Place to the given apparent time correctly, the computation should be made over again to 14 m. 5 s. after the Mean Noon of the Tables. But if an Arc of $35''$, which is the Sun's Mean Motion in 14 m. 5 s. be added to the true Longitude above found, it will become ♒ $11^o.\ 25'.\ 4''$. his true Longitude (very nearly) on the apparent Noon of *January* 20, 1722.

## *The Form of the Calculation.*

| | ☉ m. Anom. | | | | ☉ Apogee. | | | |
|---|---|---|---|---|---|---|---|---|
| | s | ° | ′ | ″ | s | ° | ′ | ″ |
| A. D. 1722 | 6 | 12 | 37 | 56 | 3 | 8 | 0 | 24 |
| Jan. 20 | 0 | 19 | 42 | 43 | | | | 3 |
| | 7 | 2 | 20 | 39 | 3 | 8 | 0 | 27 |
| | 3 | 8 | 0 | 27 | | | | |
| ☉ m. Long. | 10 | 10 | 21 | 6 | | | | |
| Eq. of the Cent. | + | 1 | 3 | 23 | | | | |
| | ♒ | 11 | 24 | 29 | | | | |
| Correction for Eq. Time | | + | 35 | | | | | |
| | ♒ | 11 | 25 | 4 | | | | |

| | m. | s. |
|---|---|---|
| 1ſt part of the Eq. of Time + | 9 | 52 |
| The other part — — — + | 4 | 13 |
| Abſolute Equ. of Time — + | 14 | 5 |

☉ true Longitude *Jan.* 20, 1722, nearly.

Having found the Sun's true Longitude, his Declination may be obtained from the Table entitled, *Tabula Declinationum punctorum Eclipticæ* (B b) and his R. Aſcenſion from *Tabula Aſcenſionum rectarum punctorum Eclipticæ* (B b 2 &c.)

## PRECEPTS FOR THE TABLES OF THE MOON.

### *The Year and Month being given, to find the mean times of the Syzygies.*

1. From the Tables *Epochæ mediarum Conjunctionum Lunæ cum Sole* (* E e &c.) and *Revolutiones Lunæ ad Solem in menſibus anni communis* (** E e) collect the days and parts of a day anſwering to the given Year and Month, and likewiſe the Sun's mean Anomaly, and the mean diſtances of the Sun from the Moon's Apogee and Node. In Leap Years ſubtract one from the number of days in the Months after *February*. If the Oppoſition be ſought, add half a Synodical Month (which, with the mean Motions anſwering thereto, is at the bottom of the Table of Months) to the Time of Conjunction found as above, and the Mean Motions for the half Month to the Mean Motions at the Conjunction.

2. From *Tabula Æquationum annuarum &c.* (L l 3 &c.) take out the Equations of the Moon's Apogee and Node anſwering to the Sun's mean Anomaly, which being applied, with contrary Signs to thoſe directed in the Tables, to the Sun's mean diſtances from the Moon's Apogee and Node, will give his diſtance from each once equated. Add to theſe, or ſubtract from them (according as the Table ſhall direct) the Equation of the Sun (found by the third Precept of the Sun) and the former will be the Annual Argument of the Moon; the latter, the true diſtance of the Sun from the Node once equated.

3. The mean diſtance of the Sun from the Moon's Apogee once equated, ſubtracted from the Sun's mean Anomaly, is the Argument of the fourth Equation of the Moon in the Conjunctions. But in the Oppoſitions, both this Argument and the Annual Argument muſt be encreaſed by ſix Signs.

4. In *Tabula Æquationum annuarum Lunæ* (L l 3 &c.) find the Moon's Annual Equation anſwering to the Sun's mean Anomaly. In the Table entitled *Æquatio ſemeſtris altera* (M m) find the third Equation of the Moon anſwering to the Sun's diſtance from the Node. In the Table *Æquatio Lunæ quarta* (ibid.) find the fourth Equation to its proper Argument. And laſtly in *Tabula Æquationum Lunæ in Syzygiis* (O o 3) find the Equation anſwering to the annual Argument. The ſum of theſe Equations whenever the true Syzygy happens at the ſame time with the Mean (which is but ſeldom) will be equal to the Equation of the Sun's Center. But when the

thus

true Syzygy precedes the Mean, the ſum of theſe Equations will exceed that Equation: And when the Mean Syzygy precedes the true, the Sun's Equation will exceed the Sum of theſe Equations of the Moon. The difference therefore between this Sum and the Equation of the Sun, by means of the Table *Motus medii Lunæ à Sole* (** E e 2) will give the time between the Mean Syzygy and the true, very nearly.

## EXAMPLE I.

*Required the mean time of New Moon in* July *in the year* 1684.

| | Mean conjunc. ☉ me. Anom. | ☉ from ☽ apog. | ☉ from ☊ |
|---|---|---|---|
| | D h m s ˢ ° ′ ″ | ˢ ° ′ ″ | ˢ ° ′ ″ |
| 1684. | 6 13 22 38 6 18 57 15 | 9 19 6 8 | 6 0 25 39 |
| June, leap year. | 25 4 24 18 5 24 37 56 | 5 4 54 3 | 6 4 1 24 |
| July | 1 17 46 56 0 13 35 11 | 2 24 0 11 | 0 4 27 3 |
| Diff. ☉ Eq. ☽ Eq. | + 8 54 6 −2 24 4 47 | + 4 36 | — 2 11 |
| 6 July | 2 2 41 2 9 19 30 24 | 2 24 4 47 | 0 4 24 52 |
| | Arg. 4th. Eq. | — 26 47 | — 26 47 |
| | | 2 23 38 0 | 0 3 58 5 |
| | | Annual Arg. | ☉ fr. ☊ |

| | | ° ′ ″ |
|---|---|---|
| 1ſt Eq. ☽ | + | 0 2 41 |
| 3d | — | 0 0 6 |
| 4th | — | 0 2 16 |
| Æq. in ſyz. | — | 4 58 24 |
| Sum | — | 4 58 5 |
| ☉ Equation | — | 0 26 47 |
| Diff. | | 4 31 18 |
| Hours 8 = | | 4 3 49 |
| | | 27 29 |
| Min. 54 = | | 27 26 |
| Sec. 6 = | | 0 3 |

Therefore the mean time of Conjunction in the Month of July, A. D. 1684, was July 2, 2. h. 41. m.

## EXAMPLE II.

*Required the mean time of Full Moon in* Auguſt *in the year* 1681.

| | Mean conjunc. ☉ me. Anom. | ☉ à ☽ Apog. | ☉ à ☊ |
|---|---|---|---|
| | D h m s ˢ ° ′ ″ | ˢ ° ′ ″ | ˢ ° ′ ″ |
| 1681. | 8 22 12 45 6 22 3 19 | 1 23 52 52 | 4 5 37 4 |
| July | 25 17 8 21 6 23 44 15 | 6 0 43 3 | 7 4 41 38 |
| ½ Syn. Mon. | 14 18 22 2 0 14 33 10 | 0 12 54 30 | 0 15 20 .7 |
| Auguſt | 18 9 43 8 2 0 20 44 | 8 7 30 25 | 11 25 38 49 |
| Diff. ☉ Eq. ☽ Eq. | + 5 36 −8 7 47 37 | + 17 12 | — 8 11 |
| ☌ Aug. | 18 15 19 5 22 33 7 | 8 7 47 37 | 11 25 30 38 |
| | +6 | — 1 40 2 | — 1 40 2 |
| | 11 22 33 7 | 8 6 7 35 | 11 23 50 36 |
| | Arg. 4th Eq. | Annual Arg. | ☉ à ☊ |
| | | + 6 | |
| | | 2 6 7 35 | |
| | | Arg. Equ. in Syz. | ☌ |
| | | D h m | |
| | | Therefore the Oppoſition happened Aug. 18 15 19 mean Time. | |

| | | ° ′ ″ |
|---|---|---|
| 1ſt Eq. ☽ | + | 0 10 9 |
| 3d | + | 0 0 10 |
| 4th | — | 0 0 19 |
| Eq. in Syz. | — | 4 40 41 |
| Sum | — | 4 30 41 |
| ☉ Equation | — | 1 40 2 |
| Diff. | | 2 50 39 |
| Hours 5 | = | 2 32 23 |
| Min. 36 | = | 18 16 |

The Times thus found will differ ſomewhat from the truth, and are to be corrected by finding the true place of the Moon by the Anomaliſtic Tables (F f &c.) according to the Precepts following.

To

*To find the true place of the Moon to any given mean Time of Conjunction or Oppoſition.*

1. Find the Sun's true Longitude to the given time, and ſet down his Mean Anomaly to Thirds.

2. In the Tables *Epochæ mediorum motuum Lunæ exiſtente Terra in Aphelio*, (F f &c.) find the Mean Longitudes of the Moon, her Apogee, and Node to the time when the Earth was laſt in its Aphelion.

3. From the Tables entitled, *Medii motus Lunæ Apogæi & Nodorum ad gradus Anomaliæ mediæ Solis* (F f 4 and following) and *Medii motus Lunæ Apogæi & Nodorum ad minuta Anomaliæ mediæ Solis* (H h 2) take out the mean Motions of the Moon, her Apogee, and Node, anſwering to the Sun's Mean Anomaly: Add theſe motions of the Moon and Apogee to the former, and ſubduct that of the Node; and you will have the places of the Moon, Apogee and Node once equated.

4. The diſtance of the Sun from the Moon's Node once equated, is the Argument of the third Equation of the Moon entitled, *Æquatio ſemeſtris altera* (M m). The place of the Sun's Apogee, ſubtracted from the place of the Moon's Apogee, is the Argument of the fourth Equation, *Æquatio Quarta Lunæ* (ibid.) in the Conjunctions; but in the Oppoſitions this quantity muſt be encreaſed by the addition of ſix Signs. The Annual Argument in the Conjunctions, and the ſame encreaſed by ſix Signs in the Oppoſitions, is the Argument of *Tabula Æquationum Lunæ in Syzygiis* (O o 3). And by the proper application of theſe Equations the true place of the Moon in her Orbit will be obtained.

5. The place of the Node ſubtracted from the true place of the Sun, in the Conjunctions; but from its oppoſite, in the Oppoſitions, is called the Argument of Latitude in the Syzygies; to which the Latitude of the Moon, and the Reduction of her place in her Orbit to the Ecliptic, are found in *Tabula Latitudinaria Lunæ in Syzygiis* (O o 4).

6. If the given time be found to differ from that of the true Syzygy, it may be corrected by the Table *Motus horarii Lunæ à Sole* (** E e 2).

## EXAMPLE I.

*Required the Moon's true place at the time of New Moon before found, A.D.* 1684, July 2, 2*h.* 41 *m. mean time, and thence the correct time of Conjunction.*

| | ☉ Mean Anom. | ☉ Apogee | | ☽ Apogee | ☽ ☊ |
|---|---|---|---|---|---|
| | ° ′ ″ ‴ | ° ′ ″ | | ° ′ ″ | ° ′ ″ |
| 1684 | 6 12 29 28 46 | 3 7 21 59 | ☽ mean long. | 0 25 25 13 | 3 17 14 22 |
| Biſſ. July 2 | 6 1 21 2 3 | 30 | ° ′ ″ | 1 23 46 | 39 49 |
| Hours 2 | 4 55 41 | 1684 | 9 19 19 19 | 6 27 | 3 4 |
| Min. 41 | 1 41 1 | ☉M. An. 13° | 5 23 50 19 | | |
| | | 57′ | 12 42 2 | | |
| ☉ M. Anom. | 0 13 57 7 31 | 7″ | 1 33 | | |
| ☉ Apogee | 3 7 22 29 | 31‴ | 7 | | |
| ☉ M. long. | 3 21 19 36 | | 3 25 53 20 | 0 26 55 26 | 3 16 31 29 |
| ☉ Equation | — 27 29 | 3d Equ. | — 0 7 | 9 19 32 57 | 0 4 20 38 |
| | | 4th | — 2 16 | Arg. 4th Equ. | ☉ a ☊ |
| ☉ Long. | 3 20 52 7 | Eq. in Syz. | — 4 58 28 | 2 23 56 41 | ° ′ ″ |
| | | ☽ | 3 20 52 29 | Annual Arg. | 0 22 47 N |
| | | ☉ | 3 20 52 7 | | Lat. ☽. |
| | | Diſtance ☽ from ☉ | 0 0 0 22 | | |



The

The Moon therefore had paſſed the Conjunction by an Arc of 22″, and the true Conjunction preceded the given time by about 44 ſeconds of an hour; (for in that ſpace of Time the Moon's mean motion from the Sun is 22″.) Therefore the true Conjunction was at $2^h.\ 40^m.\ 16^s.$ of mean time.

The abſolute Equation of Time was then $4^m.\ 58^s$ additive, ſubtract it therefore from the Mean Time here found, and we ſhall have $2^h.\ 35^m.\ 18^s$ for the apparent time of the New Moon.

## EXAMPLE II.

*Required, the Moon's true place at the time of Full Moon before found, A. D. 1681, Aug. 18, 15h. 19m. mean time, and thence the correct time of Oppoſition.*

| | ☉ M. Anom. | ☉ Apogee |
|---|---|---|
| | s ° ′ ″ ‴ | s ° ′ ″ |
| 1681. | 6 13 15 29 56 | 3 7 18 57 |
| Aug. 18. | 7 16 41 17 34 | 38 |
| Hours 15. | 36 57 36 | |
| Min. 19. | 46 49 | 3 7 19 35 |
| ☉ M. Anom. | 2 0 34 31 55 | |
| Apogee | 3 7 19 35 | |
| ☉ M. Long. | 5 7 54 7 | |
| Equation | — 1 40 16 | |
| ☉ true Long. | 5 6 13 51 | |
| ☽ Apogee | 8 29 54 13 | |
| | 2 6 19 38 | |
| | Annual Arg. in 8 | |

| | ☽ M. Long. | ☽ Apogee | ☽ ☊ |
|---|---|---|---|
| | s ° ′ ″ | s ° ′ ″ | s ° ′ ″ |
| 1681 | 8 10 54 55 | 8 23 20 30 | 5 15 16 0 |
| Signs 2. | 2 22 18 8 | 6 29 48 | 3 5 16 |
| Min. 34. | 7 34 33 | 3 51 | 1 50 |
| 31‴. 55‴. | 7 7 | 4 | 2 |
| | 11 10 54 43 | 8 29 54 13 | 5 12 8 52 |
| 3d Equat. | + 0 0 10 | 11 22 34 38 | 11 24 4 59 |
| 4th Eq. | — 0 0 19 | Arg. of 4th Eq. | Arg. of 3d Eq. |
| Eq. in Syz. | — 4 41 2 | | 5 24 4 59 |
| | | | Arg. of Lat. in 8 |
| ☽ | 11 6 13 32 | | ° ′ ″ |
| ☉ | 5 6 13 51 | | ☽ Lat. 0 31 0 N. |
| Diſtance of ☽ from ☉ | 5 29 59 41 | | |

Here the Moon is 19″ behind the Oppoſition, which her mean motion from the Sun will compleat in 38 ſeconds. Therefore the true Oppoſition was at $15^h.\ 19^m.\ 38^s$ of mean Time, nearly.

### *To find the mean time of the Syzygies to a given Year and Month before the Chriſtian Era.*

1. In the Table *Epochæ mediarum Conjunctionum Lunæ cum Sole* (* E e &c.) find a Year of the 18th Century, which added to the given number of Years before Chriſt, diminiſhed by One, ſhall make a number of whole Centuries.

2. Seek this number of Centuries in the Table *Revolutiones Lunæ ad Solem in Annorum centuriis* (** E e 3), and ſubtract the time, and Motions anſwering to it, from the Time and Motions anſwering to the Year of the 18th Century before found, and they will give the mean Time of the firſt mean Conjunction in the given Year before Chriſt, with the Motions anſwering thereto. Whence the time of Conjunction or Oppoſition in the given Month may be found by the Precepts already delivered.

If the Year of the 18th Century be a Leap Year, the given Year before Chriſt was likewiſe a Leap Year.

EX-

## EXAMPLE.

*Required the mean time of the Moon's Conjunction with the Sun, in the month of* May, *in the year before Chriſt* 585.

The years 584
Added to 1716

Make 2300 or 23 whole Centuries.

| | D h m s | ☉ me. Anom. s ° ′ ″ | ☉ à ☽ Apog. s ° ′ ″ | ☉ fr. ☒ s ° ′ ″ |
|---|---|---|---|---|
| 1716 | 12 16 6 46 | 6 24 41 0 | 2 12 33 1 | 2 25 57 37 |
| 2300 ſubtr. | 11 5 57 54 | 11 19 46 54 | 1 5 58 33 | 7 25 26 59 |
| | 1 10 8 52 | 7 4 54 6 | 1 6 34 28 | 7 0 30 38 |
| May biſſex. | 26 15 40 15 | 4 25 31 37 | 4 9 5 2 | 5 3 21 10 |
| | 28 1 49 7 | 0 0 25 43 | 5 15 39 30 | 0 3 51 48 |
| | + 2 14 35 | 6 14 46 4 | + 9 | — 4 |
| | | Arg. 4th Eq. | — 51 | — 51 |
| 6 May | 28 4 3 42 | | | |
| the mean time of Conjunction fought. | | | 5 15 38 48 Ann. Arg. | 0 3 50 53 ☉ à ☒ |

| | ° ′ ″ |
|---|---|
| 1ſt Eq. ☽ | + 0 0 5 |
| 3d | — 0 0 6 |
| 4th | — 0 0 37 |
| Equ. in Syz. | — 1 8 35 |
| Sum | — 1 9 13 |
| ☉ Equation | — 0 0 51 |
| | 1 8 22 |
| Hours 2 = | 1 0 57 |
| Min. 54. ſec. 35. | 0 7 25 |

By a like method may the Moon's true place be found by the Anomaliſtic Tables; but while the other motions for the centuries of years are ſubtracted, the Longitude of the Node muſt be added to the radical Longitude for the year of the 18th century. As in the following example.

## EXAMPLE.

*Required the Moon's true place to the mean time found in the foregoing Example.*

| | ☉ m. Anom. s ° ′ ″ ‴ | ☉ Apog. s ° ′ ″ | ☽ me. long. s ° ′ ″ | ☽ Apog. s ° ′ ″ | ☽ ☒ s ° ′ ″ | |
|---|---|---|---|---|---|---|
| 1716 | 6 12 11 41 41 | 3 7 54 20 | 7 8 59 37 | 8 7 35 37 | 6 28 17 2 | |
| 2300 ſubtr. | 11 8 41 42 40 | 1 8 45 33 | 5 15 8 35 | 11 23 42 30 | 6 27 25 50 | add. |
| | 7 3 29 59 1 | 1 29 8 47 | 1 23 51 2 | 8 13 53 7 | 1 25 42 52 | |
| May 28 Biſſ. | 4 26 51 16 20 | 25 | | | | |
| Hours 4 | 9 51 22 | | | | | |
| Min. 3. 42ſ. | 9 5 | ☉ Anom. 31′ 15″ 48‴ | 6 54 26 | 3 30 | 1 40 | |
| | | | 3 31 | 2 | 1 | |
| ☉ M. Anom. | 0 0 31 15 48 | | | | | |
| ☉ Apog. | 1 29 9 12 | | 2 0 48 59 | 8 13 56 39 | 1 25 41 11 | |
| | | 3d Eq. | — 0 0 6 | 5 15 42 47 | | |
| ☉ M. long. | 1 29 40 28 | 4th | — 0 0 37 | Ann. Arg. | ☽ Apog. 8 13 56 39 | |
| ☉ Eq. | — 1 2 | Eq. in Syz. | — 1 8 15 | | ☉ ſ Apog. 1 29 9 12 | |
| ☉ Long. | 1 29 39 26 | | ☽ 1 29 40 1 | | | 6 14 47 27 Arg. 4th Eq. |
| | | | ☉ 1 29 39 26 | | | |
| | | Diſt. of ☽ from ☉ | 0 0 0 35 | | | |

Therefore the Moon being paſt the Conjunction by an arc of 35″; ſubtract 1ᵐ. 9ˢ from the time before found, and there remains 4ʰ. 2ᵐ. 33ˢ for the correct time of Conjunction fought.

To

## *To find the Moon's Place for any given Time.*

1. Find the Sun's true Longitude at the given Time. And if the given Time be apparent, convert it into Mean.

2. From the Tables, *Epochæ mediorum motuum Lunæ & Apogæi ejus* (H h 4 &c); *Epochæ motus Nodi aſcendentis Lunæ* (I i 2); *Medii motus Lunæ Apogæi & Nodorum ejus ad dies menſium* (I i 3 &c.) and, *Medii motus Lunæ, Apogæi, & Nodorum ad horas & minuta horaria*, take out the mean Places of the Moon, her Apogee and Node to the given mean Time. The mean motions of the Moon and her Apogee for months, days, and parts of a day, muſt be added to their radical mean Longitudes found in the Table *Epochæ mediorum motuum* &c. (H h 4); but the mean Motions of the Node muſt be ſubtracted therefrom.

3. In *Tabula Æquationum annuarum Lunæ, Apogæi & Nodorum*, (L l 3 and the following) find the Equations of the Moon, her Apogee, and Node, anſwering to the Sun's mean Anomaly, and add them to, or ſubtract them from, the reſpective mean Places, as the Table ſhall direct.

4. The Argument of the ſecond Equation of the Moon, which is entitled *Æquatio ſemeſtris prima* (M m) is the diſtance of the Sun from the Moon's Apogee, and is called the Annual Argument.

5. The Argument of the third Equation entitled *Æquatio ſemeſtris altera* (ibid.) is the diſtance of the Sun from the Node.

6. For the Argument of the fourth Equation (ibid.) add the Place of the Sun's Apogee to the Annual Argument, and ſubtract their ſum from the Place of the Moon thrice equated. But this being Sir *Iſaac Newton*'s ſixth Equation, its argument ſhould be corrected by the addition or ſubtraction of the Equation of the Moon's Center *.

7. In the ſecond column of *Tabula Æquationis Apogæi & Excentricitatum Orbis Lunæ* (M m 2 &c.) is the ſecond Equation of the Moon's Apogee; in the fourth, the Excentricity of her Orbit; and in the ſeventh, the Logarithm for finding the Equation of the Center, all anſwering to the Annual Argument.

8. The Moon's Apogee twice equated, ſubtracted from the Moon's Place four times equated, gives her Mean Anomaly; which, when leſs than ſix Signs, is the Argument of *Tabula pro expediendo calculo Æquationis centri Lunæ* (N n &c.); but when greater, that Table muſt be entered with its complement to 12 Signs. From this Table take the Equation anſwering both to this Argument and to the Logarithm found in the 7th column of the preceding Table, and thereby encreaſe or diminiſh (as the Table ſhall direct) half the Mean Anomaly, or of half its Complement to 12 Signs; and the log. Tangent of the Angle ſo obtained added to the Logarithm abovementioned, will give the log. Tangent of half the true Anomaly, or of half its complement to 12 Signs. And the difference between the true Anomaly and the Mean is the Equation of the Center; to be ſubtracted when the M. Anomaly is leſs than ſix Signs, and to be added when greater.

* To correct the Argument of this Equation, ſubtract the Moon's Apogee once equated from the Place of the Moon, and take the remainder for the Moon's mean Anomaly. In *Tabula Æquationum Apogæi & Excentricitatis Orbis Lunæ* (M m 2 &c.) take the Logarithm in the 7th column anſwering to the Annual Argument, and add it to the logarithmic Tangent of half the Moon's mean Anomaly. Their ſum will be the tangent of an Angle, the double of which ſubtracted from the Moon's M. Anomaly will give the correction of this Argument; to be ſubtracted from the Argument, if the Moon's Mean Anomaly be leſs than ſix Signs, but added if greater. Thus in the following example you will have

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | s | ° | ′ | | | ° | ′ | |
| For the Moon's M. Anomaly | 4 | 18 | 48 | its half | 69 | 24 | tan. | 10.4249 |
| *Log. pro æquatione Centri Lunæ* | | | | — | — | — | — | 9.9422 |
| An Angle whoſe double is | 4 | 13 | 32 | | | | | 10.3671 |
| Correction to be ſubtracted | | — 5 | 16 | | | | | |

5. The

9. The Sun's true Longitude ſubtracted from the Place of the Moon, now five times equated, is the Argument of *Tabula Variationis ſive Reflectionis* (N n 4) which exhibits the Variation at the mean diſtance of the Earth from the Sun. To the logiſtical Logarithm of the quantity found in this Table, add the Logarithm in the Table *Logarithmi pro correctione variationis* (ibid.) anſwering to the Sun's mean Anomaly; their ſum will be the logiſtical Logarithm of the true variation; which added to, or ſubtracted from the Moon's place five times equated, will give her true Place in her Orbit.

10. In *Tabula pro computo Latitudinis Lunæ* (O o) find the ſecond Equation of the Node, the log. Sine of the Inclination, and the greateſt Reduction; all anſwering to the Argument of the third Equation. The Longitude of the Node already once equated, being corrected by this Equation, as the Table ſhall direct, and ſubtracted from the true Place of the Moon in her Orbit, will give the Argument of Latitude.

To the log. Sine of the Inclination, add the log. Sine of the Argument of Latitude, their ſum, deducting Radius, will be the log. Sine of the Moon's Latitude; which, when the Argument of Latitude is leſs than ſix Signs, is North; when greater, South.

To the logiſtical Logarithm of the greateſt Reduction, add the arithmetical complement of the log. Sine of the Argument of Latitude, their ſum will be the logiſt. Logarithm of the true Reduction; which, ſubtracted from the true Place of the Moon in her Orbit in the firſt and third Quadrant of the Argument of Latitude, or added thereto in the ſecond and fourth Quadrant of the ſame, will give the Moon's Longitude in the Ecliptic. x double

11. In *Tabula Parallaxium Lunæ horizontalium in Syzygiis* (O o 2) find the Parallax anſwering both to the Moon's true Anomaly, and the Excentricity of her Orbit (found by Precept 7th); the logiſtical Logarithm of this Parallax, added to the Logarithm found in the Table *Logarithmi pro Parallaxi extra Syzygias* anſwering to the Moon's diſtance from the neareſt Syzygy, will give the logiſtical Logarithm of the true horizontal Parallax of the Moon.

12. The proportion of the Moon's horizontal Parallax to her horizontal Diameter is as 60 to 33. Add therefore 2596 (the logiſtical Logarithm of 33′) to the log. Logarithm of the true horizontal Parallax, it will give the log. Logarithm of the horizontal Diameter of the Moon.

The horizontal Diameter of the Moon is to the Moon's Diameter in Longitude, as the Coſine of the Moon's Latitude to the Radius. And the horizontal Diameter is to the Diameter in R. Aſcenſion, as the Coſine of her Declination to the Radius.

The quantity found in the Table *Aug. Diam. Lunæ* (O o 5) anſwering to the Moon's Diſtance from the Vertex (and likewiſe to her Diſtance from her Apogee) being added to the Moon's horizontal Diameter will give her apparent Diameter; which, encreaſed in the reſpective proportions above mentioned, will give her apparent Diameters in Longitude and R. Aſcenſion.

# EXAMPLE.

In the year 1725, *Dec.* 5, the Weſtern Limb of the Moon, was obſerved by Dr. *Halley* to paſs the Meridian of the Obſervatory at *Greenwich* at $9^h.\ 8^m.\ 5^s$ mean time, its obſerved right aſcenſion being $42°.\ 26'.\ 15''$, and the diſtance of the lower Limb from the Vertex $34°.\ 9'.\ 15''$.

*Required the Moon's place at the ſame time according to the Tables.*

| | ☉ M. Anom. | ☉ Apog. | ☉ true Long. |
|---|---|---|---|
| | s ° ′ ″ | s ° ′ ″ | s ° ′ ″ |
| | 5 17 20 40 | 3 8 4 22 | 8 24 59 2 |
| | ☽ M. Long. | ☽ Apog. | ☽ ☊ |
| | s ° ′ ″ | s ° ′ ″ | s ° ′ ″ |
| 1725 | 8 19 36 54 | 7 24 56 18 | 1 13 11 2 |
| Dec. 5. | 4 26 47 52 | 1 7 46 2 | 17 57 7 |
| Hour 9. | 4 56 28 | 2 30 | 1 12 |
| Min. 8. ſec. 5. | 4 26 | 2 | 1 |
| | 1 21 25 40 | 9 2 44 52 | 0 25 12 42 |
| Annual Equat. ′ ″ | + 2 38 | — 4 28 | + 2 7 |
| 2d Eq. + 1 0 | 1 21 28 18 | 9 2 40 24 | 0 25 14 49 |
| 3d — 0 41 | — 1 22 | — 2 41 0 | + 1 19 7 |
| 4th — 1 41 | | | |
| | 1 21 26 56 | 8 29 59 24 | 0 26 33 56 |
| Eq. of Centre | — 5 3 56 | 4 21 27 32 | 1 15 46 45 ☽ |
| | | ☽ me. Anom. | |
| | 1 16 23 0 | | 0 19 12 49 |
| † Variation | — 36 15 | ½ me. Anom. | Arg. Lat. |
| | | ° ′ ″ | |
| | 1 15 46 45 | 70 43 46 | |
| ‡ Reduction | — 4 11 | — 1 47 | |
| ☽ Long Eclip. | ♉ 15 42 34 | 70 41 59 tan. | 10.455683 |
| * ☽ Lat. North | 1 39 57 | Log. for Eq. centre | 9.942214 |
| | | 68 11 48 tan. | 10.397897 |
| | | $4^s$ 16 23 36 its double | |
| | | — 5 3 56 Equation of Centre to be ſubtracted. | |

Arg. of the Equations.

| | |
|---|---|
| s ° ′ ″ | |
| 5 17 20 0 | ☉ M. An. |
| Arg. of the ann. Equat. | |
| 8 24 59 2 | ☉ Long. |
| 9 2 40 24 | ☽ Apog. |
| 11 22 18 38 | Annual Arg. |
| Excentr. 066429 | |
| 8 24 59 | ☉ Long. |
| 0 25 15 | ☽ ☊ |
| 7 29 44 | Arg. 3d Equ. |
| 3 8 4 | ☉ Apog. |
| 11 22 18 | An Arg. |
| 3 0 22 | |
| 1 21 28 | ☽ Long. |
| 10 21 6 | |
| — 5 16 | Correction. |
| 10 15 50 | Arg. 4th Equ. |
| 1 16 23 | ☽ |
| 8 24 59 | ☉ Long. |
| 4 21 24 | ☽ fr. ☉ Arg. of Variation. |

† ☽ Simple variat. — 34 18 LL 2430 Correction from the table 9.9758

☽ True variation — 36 15 LL 2188

‡ Greateſt Reduct. — 6 44 LL 9499 Sin. doub. Arg. Lat. Ar. Co. 2065

True Reduct. — 4 11 LL 11564

* Log. ſin Incl. 8.94616 Log. ſ. Arg. Lat. 9.51732

☽ Lat. Nor. 1 39 57 8.46348

*Now*

## *Now to find the Moon's true place from the obſervation.*

| | | | |
|---|---|---|---|
| The horizontal parallax of the Moon in the Syzygies, to the true Anomaly $4^s.\ 16°.\ 23'$, and to the excentricity 0664 is $60'.\ 3''$, whoſe logiſtical logarithm is —— | — 3 | | |
| The logarithm for the parallax *(extra Syzygias)* to the diſtance of ☽ fr. ☉ $4^s.\ 21°.\ 24'$ (or $1^s.\ 8°.\ 36'$ from the Oppoſition) is — — — — — — | 24 | | |
| Their ſum is the logiſt. log. of the true horizontal parallax | 21 | = | $0\ 59\ 43$ |
| To which add the conſtant logarithm — — — | 2596 | | |
| And we have the logiſt. log. of the Moon's horiz. diam. | 2617 | = | $0\ 32\ 50$ |
| The obſerved diſt. of the Moon's lower limb from the vert. was | | | $34\ 9\ 15$ |
| To which add the refraction — — — — — | | | $+\ 0\ 36$ |
| Gives its apparent diſtance from the vertex, clear of refraction | | | $34\ 9\ 51$ |
| To the logiſt. log. of the horiz. parallax, found above — | 21 | | |
| Add the Arith. Compl. of the ſine of the diſtance of the Moon's limb from the vertex — — — — | 2506 | | |
| The ſum will be the logiſt. log. of the parallax in altitude of the Moon's lower limb * — — — — | 2527 | = | $0\ 33\ 32$ |
| This being ſubtracted from the correct apparent diſtance of the Moon's limb from the vertex, gives its true diſtance from the ſame — — — — — | | | $33\ 36\ 19$ |
| Subtract alſo the horizontal ſemidiameter of the Moon — | | | $16\ 25$ |
| Remains the true diſtance of the Moon's centre from the vertex — — — — — — | | | $33\ 19\ 54$ |
| The compl. of the latitude of the Obſervatory added thereto | | | $38\ 31\ 30$ |
| Gives the true diſt. of the Moon's centre from the North Pole | | | $71\ 51\ 24$ |
| To the logiſt. log. of the Moon's horizontal diameter — | 2617 | | |
| Add the log. coſine of the Moon's declination, or log. ſine of her diſtance from the Pole — — — — | 9778 | | |
| Their ſum will be the logiſt. log. of the Moon's horizontal diameter in right Aſcenſion — — — — | 2395 | = | $0\ 34\ 34$ |
| To the obſerved right Aſcenſion of the Moon's Weſtern limb — — — — — — | | | $42\ 26\ 15$ |
| Add the Moon's ſemidiameter in right Aſcenſion — — | | | $0\ 17\ 17$ |
| Their ſum will be the true right Aſcenſion of the Moon's centre — — — — — — | | | $42\ 43\ 32$ |

The Moon's right Aſcenſion 42°. 43′ 32″, and her diſtance from the North Pole 71°. 51′. 24″ being given, her longitude in the ecliptic will be found in ♉ 15°. 42′. 12″, with 1°. 38′. 37″ North latitude.

Here the Longitude of the Moon, found from the Obſervation, is 22″ leſs than the Tables give it.

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* The Parallax in altitude being as the ſine of the *apparent* diſtance from the vertex; whenever the apparent diſtance is not given, the true diſtance may be increaſed by gueſs, and from thence the parallax in altitude found. Or, if the true diſtance from the vertex be taken for the apparent, and the parallax in altitude be found from it, that true diſtance increaſed by this parallax may be taken for the apparent; and the parallax thence found will be very near the truth.

## *To correct the computed Places of the Moon.*

The Errors of the Tables may in a great meaſure be corrected by help of the laſt column of the Tables entitled *Lunæ Meridianæ &c.* (☾ b and the following pages). For after a Period of 223 Synodical Months, the Errors will recur nearly of the ſame magnitude.

To find the day in theſe Tables which correſponds to the time for which the correction is required, if that time be after *Dec.* 27, 1739, ſubtract this Period or a multiple thereof, or a Period of 111 Synodical Months, (which are to be found in the Table entitled *Periodi Lunares* (** E e 4) from the given time; but if the given time precede *Jan.* 13, 1722, add the like Periods thereto, ſo that the Remainder or Sum may fall on a day between *Jan.* 13, 1722 and *Dec.* 27, 1739; and if there was an obſervation at *Greenwich* on the day ſo found, the laſt column of the Tables *Lunæ Meridianæ &c.* will exhibit the Error of the Computation. But if the day correſponding to the given Time be not found in the Tables *Lunæ Meridianæ &c.* no correction can be had but by comparing the Errors of the adjacent days, when they happen to lie near enough for that purpoſe to the day ſought.

And obſerve, that when the Period of 223 Synodical Months contains no more than four Leap Years, it will conſiſt of 18 years, 11 days, 7 hours, 43 min. and 20 ſec. but whenever it contains five, it will be compleated in 18 years, 10 days, 7 hours, 43 minutes, and 20 ſeconds.

## EXAMPLE.

### *To find from the Tables corrected, the Time the Moon's Eaſtern Limb paſſed the Meridian of* Greenwich *on* Dec. 28, 1745.

In this Example, the Period of 18 years will contain five Leap Years; therefore from the given time ſubtract 18 years 10 days, and we ſhall have *Dec.* 18, 1727, for the day in the Tables *Lunæ Meridianæ &c.* which correſponds to the given time, on which day the Moon's Limb was obſerved to paſs the Meridian at $13^h.\ 45^m.\ 21^s$ Mean Time. 18 years and 10 days want $7^h.\ 43^m.\ 20^s$ of a compleat Period, in which time the Moon's mean Motion is 4°. 14′. 22″; and the Meridian paſſes over an Arc of the Equator equal to this Arc of Mean Motion in $16^m.\ 55^s$ of mean Time: Subtract therefore $16^m.\ 55^s$ from the time of the Obſervation, and there will remain $13^h.\ 28^m.\ 26^s$ for the time of the paſſage of the Moon's Eaſtern Limb over the Meridian of *Greenwich*, *Dec.* 28, 1745.

The Moon's computed Longitude to this time is ♌ 6°. 43′. 8″. her Latitude 3°. 49′. 24″ N.

In the laſt column of the Table *Lunæ Meridianæ &c.* the Error on *Dec.* 18, 1727, is — 3′. 1″; therefore 3″ 1′ being added to the computed Longitude gives ♌ 6°. 46′. 9″ for her correct Longitude at that time.

| | ° | ′ | ″ |
|---|---|---|---|
| Hence the R. Aſcenſion of the Moon is found to be | 130 | 12 | 38 |
| which encreaſed by her true Diameter in R. Aſcenſion | | 17 | 18 |
| is the Right Aſcenſion of the Eaſtern Limb — — — | 130 | 29 | 56 |
| To the Sun's Mean Longitude at the given time — — | 288 | 25 | 2 |
| add an Arc proportional to the ſame mean time $13^h.\ 28^m.\ 26^s$. | 202 | 6 | 30 |
| their ſum is the R. Aſcenſion of the Meridian — — | 130 | 31 | 32 |
| which is paſt the Moon's Limb by an Arc of — — | 0 | 1 | 36 |

This Arc the Meridian paſſes over in about $6\frac{1}{2}$ ſeconds of time, which

which ſubtracted from the given time would give the time of the Tranſit ſought, if the Moon by encreaſing her R. Aſcenſion after her Limb paſſed the Meridian, had not diminiſhed its diſtance from the ſame. To allow for this, add 4″ to the Arc of diſtance 0°. 1′. 36″, and it will become 0°. 1′. 40″, which the Meridian paſſes over in $7^s$ of time; therefore from the given Time $13^h.\ 28^m.\ 26^s$, ſubtract $7^s$. the remainder $13^h.\ 28^m.\ 19^s$ will be the mean time the Eaſtern Limb of the Moon paſſed the Meridian of *Greenwich* according to the Tables corrected, which was obſerved by the Rev. Dr. *Bradley* at $13^h.\ 28^m.\ 21^s$.

## *To find the Longitudes of Places on the Earth by Obſervations of the Moon.*

The Obſervations fitteſt for this purpoſe are, either the appulſes of the Moon to fixt Stars; or her diſtance from a fixt Star lying near the Parallel of Latitude in which the Moon then is; or laſtly, the diſtance of the Moon from the Sun in her firſt or laſt Quarter. From any of theſe Obſervations, the Latitude of the Place of Obſervation being given, the diſtance of the Meridian from that of *Greenwich* may be diſcovered, by finding the time reckoned at *Greenwich* when the Obſervation was made: for the difference between that time and the time in the unknown Meridian, will give the diſtance of the two Meridians from each other.

## EXAMPLE.

*In the year* 1737, Jan. 1, $6^h.\ 4^m.\ 30^s$ *apparent time (which converted into mean is* $6^h.\ 13^m.\ 40^s$*) in the Latitude* 65°. 50′. 50″ *N. an Occultation of the Star* γ *Tauri was obſerved. Required the diſtance of the Meridian under which the Obſervation was made, from that of* Greenwich.

This day is not to be found in the Tables *Lunæ Meridianæ &c.* Subtract therefore the Period of 111 Synodical Months, and it will give *Jan.* 11, 1728, for a day correſponding to the time of the Obſervation. On this day the Error is found to be — 1′. 18″.

The Longitude of the Star at the given time, deduced from the Britannic Catalogue was ♊ 2°, 7′. 0″. Its Latitude 5°. 46′. 22″ South.

Aſſume the Time at *Greenwich* by the help of any *London* Ephemeris; one of which puts down the Conjunction of the Moon with this Star at about five in the afternoon. The Moon's Longitude by the Tables to this Time is ♊ 2°. 1′. 20″ which corrected by the Error above mentioned will be ♊ 2°. 2′. 38″, with Latitude 4°. 50′. 18″ S.

| | ° | ′ | ″ | ° | ′ | ″ |
|---|---|---|---|---|---|---|
| The horizontal Parallax of the Moon at the given time is | | | | 0 | 55 | 41 |
| To the mean Longitude of the Sun — — — — | 292 | 11 | 24 | | | |
| add the mean Time of the Obſervation in the unknown Meridian $6^h.\ 13^m\ 40^s$ — — — — — | 93 | 25 | 0 | | | |
| their Sum is the R. Aſcenſion of the unknown Meridian — | | | | 25 | 36 | 24 |
| The Nonageſſimal degree of the Ecliptic in the Latitude 65°. 50′. 50″ — — — — | | | | ♉ 24 | 56 | 24 |
| The Parallactic Angle at the Moon — — — | | | | 5 | 33 | 2 |



The

| | ° | ′ | ″ |
|---|---|---|---|
| The Moon's true distance from the vertex — — | 55 | 12 | 54 |
| Her apparent Semidiameter — — — | 0 | 15 | 28 |
| The moon's true distance from the Vertex encreased by an assumed Parallax in Altitude — — — — | 55 | 59 | 0 |
| hence the true Parallax in Altitude — — — | 0 | 46 | 10 |
| * The Parallax in Longitude, to be added to the true Longitude — | 0 | 4 | 28 |
| The Parallax in Latitude, to be added to the true Latitude — | 0 | 45 | 57 |

Hence the apparent Place of the Moon's Center was ♊ 2°. 7′. 6″ with Latitude 5°. 36′. 15″ S. which being 6″ forwarder in Longitude than the Star, and the Occultation being made by the Eastern Limb of the Moon, the Occultation must have preceded the assumed Time.

To correct the time, convert the Moon's apparent Semidiameter 15′. 28″, and likewise the apparent difference of Latitude between the Moon and Star 10′. 7″, into Seconds: the difference of the Squares of these quantities is 492735″, whose Square Root 702″ or 11′. 42″ will be nearly equal to the apparent distance of the Moon's Center from the Star in Longitude at the instant of Occultation. To this add the 6″ whereby the apparent Longitude of the Moon's Center was found by the calculation to precede the Star; their sum 11′. 48″ will be nearly equal to the Arc of Longitude by which the Moon is too forward for the Occultation. By the Tables of Mean Motions, the time the Moon is passing over this Arc is found to be 21′. 30″; which subtracted from the time first assumed, will give $4^h.\ 38^m.\ 30^s$, and to this time repeat the whole computation.

The Moon's correct Longitude 1737, *Jan.* 1, $4^h.\ 38^m.\ 30^s$ is ♊ 1°. 51′. 13″, her Latitude 4°. 49′. 59″ S.

| | ° | ′ | ″ |
|---|---|---|---|
| The R. Ascension of the unknown Meridian — — — — | 25 | 35 | 31 |
| The Nonagessimal Degree of the Ecliptic — — — ♉ | 24 | 55 | 57 |
| The Parallactic Angle — — — — | 5 | 24 | 32 |
| The Parallax in Longitude, additive — — | 0 | 4 | 21 |
| The Parallax in Latitude, additive — — — | 0 | 45 | 57 |
| The apparent distance of the Star from the Moon's Center in Longitude | 0 | 11 | 26 |
| Their apparent distance in Latitude — — — | 0 | 10 | 26 |

Convert the Moon's apparent Semidiameter 15′. 28″, and likewise the apparent difference of Latitude 10′. 26″ into seconds, as before; the Square Root of the difference of the Squares of these quantities 11′. 25″, will be the apparent distance of the Star

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* In applying the Parallaxes to the computed Places of the Moon, observe

1. When the Moon is to the East of the Nonagessimal Degree of the Ecliptic, the Parallax in Longitude must be added to the true Longitude, but when she is to the West thereof it must be subtracted, to obtain the apparent Longitude.

2. The like Rule holds for the Right Ascensions, according as the Moon is to the East or to the West of the Meridian of the Place of Observation.

3. The Parallax in Latitude added to the true distance of the Moon from that Pole of the Ecliptic which is nearest to the Vertex of the Place of Observation, will give her apparent distance from that Pole; whence it will appear whether it is to be added to or subtracted from the true Latitude to obtain the apparent. But between the Tropics where the Ecliptic becomes Vertical once in 24 hours, at such times it is always to be added to the true Latitude.

4. In like manner the Parallax in Declination added to the true distance of the Moon from that Pole of the Equator which is nearest to the Vertex of the Place of Observation, will give her apparent distance from that Pole, whence it will appear whether it is to be added to or subtracted from the true Declination. But in Places of the earth which have no Latitude, the Parallax in Declination is always additive.

from

from a circle of Latitude passing over the Moon's Center; which encreased in the proportion of the Cosine of the Latitude of the Star to the Radius, will give 11′. 28 $\frac{1}{2}$″ for the apparent distance in Longitude of the Star from the Center of the Moon, at the instant of Occultation. This exceeds the distance found above by 2 $\frac{1}{2}$″, and the time requires a farther diminution.

The Moon's apparent Longitude to the time first assumed was ♊ 2°. 7′. 6″; that to the corrected time ♊ 1°. 55′. 34.″ their difference 11′. 32″ is the visible motion of the Moon in Longitude in $21^m.\ 30^s$, the interval between the two times. And

As 11′. 32″ : 2 $\frac{1}{2}$″ :: $21^m.\ 30^s$ : $5^s$—.

Therefore subtracting $5^s$ from $4^h.\ 38^m.\ 30^s$, there will remain $4^h.\ 38^m.\ 25^s$ for the mean Time at *Greenwich* when the Occultation happened under the unknown Meridian. And this time subtracted from the given mean time of the Observation leaves $1^h.\ 35^m.\ 15^s$, which converted into an Arc is 23°. 48′. 45″ the difference of Meridians sought.

But as the Occultations of Stars are not so frequently to be observed at Sea, the distance of the Moon from a fixt Star is an Observation likely to be of more use to Mariners. For this purpose a Star should be chosen as near as may be to the Parallel of Latitude in which the Moon is at the time of Observation; by which means the computed distance of the Moon from the Star will be little affected by Errors in the Moon's computed Latitude. And if the Moon's distance from two such Stars, one preceding her Place in Longitude and the other following it, be observed, and a mean taken between the times found from each Observation, the result will on many accounts be more to be depended on than from a single Observation.

The distance of the two Meridians may commonly be known within three or four degrees of the truth from the Ships Journals, and from thence the time at *Greenwich* may be assumed for the first computation. Having found the Longitude and Latitude of the Moon to the time assumed, correct the Longitude (where it can be done) as above directed, and find the Moon's Right Ascension, and distance from that Pole of the Equator which is nearest to the Vertex of the Place. Then find her Azimuth, and true distance from the Vertex; to the latter add the difference between the Moon's Parallax in altitude and the Refraction, which will give her visible distance from the Vertex. Find the Star's Azimuth to the same time, and its distance from the Vertex, from which subtract the Refraction.

Then in a spherical Triangle are given, two sides, which are the visible distances of the Moon and Star from the Vertex, and the Angle between them, *viz.* the azimuthal distance of the Moon's Center from the Star, to find the third side; which is the visible distance of the Moon's Center from the Star: And this side diminished or encreased by the Moon's apparent Semidiameter, according as the nearer Limb to the Star or the more remote one was observed, will be equal to the observed distance of the Moon's Limb from the Star, in case the time at *Greenwich* was rightly assumed: but if not, correct the time by guess, and repeat the computation; and by comparing the Errors, the time at *Greenwich* may be obtained to a sufficient exactness, and thence the distance between the two Meridians.

## EXAMPLE.

*In the year* 1725, Dec. 10, $11^h.\ 14^m$ *of apparent time (which is* $11^h.\ 13^m$ *mean Time) at a Place to the West of* Greenwich, *in the Latitude of* 40° *N. the Star* γ *Leonis was observed* 20°. 50′ *distant from the nearer Limb of the Moon. Required the distance of the unknown Meridian from that of* Greenwich.

Assume $13^h.\ 21^m$ for the mean time at *Greenwich* when the Observation was taken.

The

| | | | |
|---|---|---|---|
| The Moon's computed Longitude at this time was | ☊ 4 | 4 | 2 |
| The Error of the Tables | | + 48 | |
| The Moon's correct Longitude | ☊ 4 | 4 | 50 |
| her Latitude, North | 4 | 59 | 47 |
| her horizontal Parallax | 1 | 0 | 18 |
| The Right Aſcenſion of the Moon | 127 | 42 | 28 |
| her diſtance from the North Pole | 65 | 52 | 43 |
| The Right Aſcenſion of the unknown Meridian (11h.13m.=☉270 31 8 / 168 15 0) | 78 | 46 | 8 |
| The Moon's Azimuth | 84 | 0 | 10 |
| her diſtance from the Vertex | 43 | 47 | 7 |
| the true Parallax in altitude | + 42 | 16 | |
| The Refraction | — 0 | 53 | |
| The Moon's viſible diſtance from the Vertex | 44 | 28 | 30 |
| Her apparent Semidiameter | 0 | 16 | 47 |
| The Longitude of the Star γ Leonis | ☊ 25 | 45 | 0 |
| Its Latitude, North | 8 | 47 | 27 |
| The Right Aſcenſion of the Star | 151 | 11 | 32 |
| Its diſtance from the North Pole | 68 | 47 | 21 |
| Its Azimuth | 96 | 10 | 40 |
| The Stars true diſtance from the Vertex | 63 | 22 | 13 |
| The Refraction | — 1 | 46 | |
| The Stars apparent diſtance from the Vertex | 63 | 20 | 27 |
| The azimuthal angle between the Star and the Moon's Center | 12 | 10 | 30 |
| The viſible diſtance of the Moon's Center from the Star | 21 | 13 | 13 |
| Subtract the Moon's apparent Semidiameter | 0 | 16 | 47 |
| remains the viſible diſtance of the Moon's Limb from the Star | 20 | 56 | 26 |

which exceeds the obſerved diſtance by 6′. 26″. therefore the aſſumed time requires a correction.

Add 15m to the aſſumed time (for the Moon was moving toward the Star), and the correct Longitude of the Moon to 13h. 36m of the ſame day, will be found ☊ 4°. 14′. 10″, with North Latitude 4°. 59′. 40″; and having again found the Viſible Diſtances of the Moon and Star from the Vertex, with the Angle comprehended between them, we ſhall thence find the diſtance of the Moon's Limb from the Star 20°. 47′. 17″, which is deficient of the obſerved diſtance by 2′. 43″. Therefore the Moon's Limb approaches the Star by an Arc of 9′. 9″ in 15 minutes of time. And

As 9′. 9″ : 6′. 26″ : : 15m : 10m. 33s.

Add therefore 10m. 33s, to 13h. 21m, and it will give the time at *Greenwich* 13h. 31m. 33s, and the difference of the times 2h. 18m. 33s. Hence the diſtance between the two Meridians is 34°. 38′. 15″.

In this Example the difference between the diſtances of the Moon and Star from the Vertex is ſo great, that the difference of Refraction is very conſiderable, and therefore the viſible diſtance of the Moon from the Star could not be accurately determined without finding both thoſe diſtances from the Vertex. But where the Altitudes of the Moon and Star are not very unequal *,

* See the Philoſophical Tranſaction, N° 368, page 109.

the

the Refraction may at once be allowed for in the obſerved diſtance by adding as many ſeconds thereto, as that conſiſts of degrees; and the work will be abbreviated, by computing the apparent diſtance of the Moon from the Star, by means of the Parallaxes in Longitude and Latitude.

## EXAMPLE.

*In the year* 1725, Dec. 10, $12^h. 50^m$ *mean time, at a Place to the Weſt of* Greenwich *in the Latitude of* 48° *North, the Star* β *Tauri was obſerved* 47°. 57′. 12″ *diſtant from the farther Limb of the Moon. Required the diſtance of the unknown Meridian from that of* Greenwich.

To correct the obſerved Arc for the Refractions add 48″ thereto, it will become 47°. 58′. 0″. Aſſume 56° for the diſtance of the unknown Meridian from *Greenwich*, which will give $16^h. 34^m$ for the time to be aſſumed.

| | ° | ′ | ″ |
|---|---|---|---|
| The Moon's Longitude computed to this Time is - ☊ | 6 | 4 | 0 |
| The Error of the Tables - - - - - | + | 0 | 48 |
| The Moon's correct Longitude - - - | ☊ 6 | 4 | 48 |
| Her Latitude North - - - - - | 4 | 58 | 6 |
| The horizontal Parallax of the Moon - - | 1 | 0 | 12 |
| The Right Aſcenſion of the unknown Meridian - | 103 | 9 | 3 |
| The Nonageſimal Degree of the Ecliptic - - | ♋ 9 | 40 | 0 |
| The Moon's Parallax in Longitude, additive - - | 0 | 24 | 38 |
| Her Parallax in Latitude, ſubtractive - | 0 | 21 | 23 |
| The apparent Longitude of the Moon - - | ☊ 6 | 29 | 26 |
| Her apparent Latitude, North - - - | 4 | 36 | 43 |
| The Longitude of the Star β Tauri - - | ♊ 18 | 43 | 50 |
| Its Latitude, North - - -- -- | 5 | 21 | 34 |

Here then are given in a Spherical Triangle, two Sides, one the apparent diſtance of the Moon from the North Pole of the Ecliptic 85°. 23′. 17″, the other the diſtance of the Star from the ſame 84°. 38′. 26″. with the Angle between them 47°. 45′. 36″, which is the difference of the Longitudes of the Moon and Star, to find the third ſide - - - - - - - - -- 47 34 25

To which add the apparent Semidiameter of the Moon - -- 0 16 48

it will give the apparent diſtance of the farther Limb of the Moon from the Star at the time aſſumed - - - - -- 47 51 13

The obſerved diſtance corrected of Refraction was - - - 47 58 0

Their difference - - - - - -- 0 6 47

Add $15^m$ to the aſſumed time for a correction, and it will give $16^h. 49^m$. To this time the correct Longitude of the Moon is ☊ 6°. 14′. 7″, her Latitude 4°. 57′. 58″ North. Find the Parallaxes in Longitude and Latitude over again, and the reſolution of the Spherical Triangle will give 47°. 43′. 51″ for the apparent diſtance of the Moon's Center from the Star; which encreaſed by the apparent Semidiameter of the Moon becomes 48°. 0′. 39″, exceeding the obſerved diſtance of the Moon's Limb from the Star by 2′. 39″. And this Error added to the former — 6′. 47″, will give 9′. 26″ for the Moon's apparent motion from the Star in $15^m$ of time. And

As 9′. 26″ : 6′. 47″ :: $15^m$. : $10^m. 42^s$.



Therefore

Therefore add $10^m$. $42^s$ to $16^h$. $34^m$ the Time firſt aſſumed, it will give $16^h$. $44^m$. $42^s$ for the Time at *Greenwich* when the Obſervation was taken under the unknown Meridian. And the difference of the Times $3^h$. $54^m$. $42^s$ gives the diſtance between the two Meridians 58°. 40′. 30″.

By a like method of Computation may the difference of Meridians be found from Obſervations of the Moon's diſtance from the Sun in her firſt and laſt Quarter. And the work will be ſomewhat more ſimple as the Sun has no Latitude. But in this caſe the computed diſtance muſt be corrected by the Semidiameter of the Sun as well as by that of the Moon. And the Sun's Diameter is to be found in *Tabula Motuum horariorum, Diametrorum &c.* (O o 5) anſwering to his Mean Anomaly.

## PRECEPTS FOR COMPUTING THE PLACES OF THE PLANETS.

### *To find the Place of a Superior or of an Inferior Planet for any given Time.*

1. Find the Sun's true Longitude for the given Time, and if the given Time be apparent convert it into mean. From the Table, *Logarithmi Diſtantiarum Solis a Terrâ* (E e 4) take out the Logarithm anſwering to the Sun's Mean Anomaly.

2. From the Tables entitled *Epochæ mediorum motuum*, and thoſe entitled *Medii motus*, collect the Mean Places of the Planet, of its Aphelion and of its Node to the given mean Time.

3. The Place of the Aphelion ſubtracted from the Mean Place of the Planet will give its Mean Anomaly; to which find the Equation of the Center in the Table entitled *Tabula Æquationum*. Add or ſubtract this as the Table ſhall direct, to or from the mean Place of the Planet, it will give the Planets true heliocentric Place in its Orbit.

4. From the Planets heliocentric Place in its Orbit, ſubtract the Longitude of the Node, the Remainder is called the Argument of Latitude; with which enter the Table entitled *Tabula Latitudinaria*, and take out the Inclination of that point of the Planets Orbit, the Reduction, and the Logarithm of Curtation, anſwering thereto. The Reduction added to the heliocentric Place of the Planet in its Orbit, or ſubtracted therefrom, as the Table ſhall direct, will give the Planets true Longitude in the Ecliptic.

5. From the Table *Logarithmi diſtantiarum* ——— *a Sole*, take the Logarithm anſwering to the Planets Mean Anomaly, from which ſubtract the Logarithm of Curtation, the remainder will be the Logarithm of the Curtate diſtance of the Planet from the Sun.

6. The heliocentric Longitude of a ſuperior Planet ſubtracted from the Longitude of the Sun, or the Sun's Longitude ſubtracted from the heliocentric Longitude of an Inferior Planet, is called the Angle of Commutation.

7. To the difference of the Logarithms of the diſtance of the Sun from the Earth, and of the Curtate Diſtance of the Planet from the Sun, add the Logarithmic Tangent of 45°, their Sum will be the Logarithmic Tangent of an Angle exceeding 45°.

To the Logarithmic Tangent of the Exceſs of this Angle above 45°, add the Logarithmic Tangent of half the Angle of Commutation, their ſum (ſubtracting Radius) will be the Log. Tangent of an Angle, which, added to half the Angle of Commutation of a Superior Planet, or ſubtracted from half the Angle of Commutation of an Inferior Planet,

Planet, will give the Elongation of that Planet. But when half the Angle of Commutation exceeds three Signs, its Complement to fix Signs muſt be encreaſed or diminiſhed by the Angle above found to give the Elongation.

8. If the Angle of Commutation be leſs than ſix Signs, the Elongation of a Superior Planet ſubtracted from the Sun's Longitude, or the Elongation of an Inferior Planet added thereto, will give the Planet's true Geocentric Longitude. But if the Angle of Commutation exceed ſix Signs, the contrary muſt be obſerved in either caſe.

9. The Tangent of the Inclination, is to the Tangent of the Planets geocentric Latitude, as the Sine of the Angle of Commutation, to the Sine of the Angle of Elongation.

## EXAMPLE I.

*Required, the Geocentric Place of the Planet* Venus, June 13, $1^h$. $17\frac{1}{2}^m$, *mean time in the year* 1690.

| | ☉ Me. Anom. | ☉ Apog. | ♀ Me. long. | ♀ Aphel. | ♀ Node | Inclin. N. |
|---|---|---|---|---|---|---|
| | s ° ′ ″ | s ° ′ ″ | s ° ′ ″ | s ° ′ ″ | s ° ′ ″ | ° ′ ″ |
| 1690 | 6 12 55 43 | 3 7 28 3 | 7 22 26 18 | 10 6 22 5 | 2 13 52 43 | |
| June 13 | 5 11 38 19 | 0 27 | 8 22 45 20 | 25 | 14 | 2 58 42 |
| Hour 1 | 2 28 | | 4 0 | | | |
| Min. 17 | 42 | | 1 8 | 10 6 22 30 | 2 13 52 57 | |
| Sec. 30 | 1 | | 2 | 6 8 54 18 | 2 1 31 20 | |
| | | | | ♀ Me. Anom. | Arg. lat. | |
| ☉ M. Anom. | 11 24 37 13 | | 4 15 16 48 | | | |
| Apog. | 3 7 28 30 | Proſth. | + 7 29 | Log. diſt. Earth fr. Sun | | 5,007256 |
| | 3 2 5 43 | | 4 15 24 17 | Log. diſt. ♀ fr. Sun | | 4,855745 |
| Proſth. | + 10 41 | Reduction | − 2 31 | Tang. 54 47 51 | | 10,151511 |
| | | | | −45 00 00 | | |
| ☉ Long. | 3 2 16 24 | ♀ Helioc. | 4 15 21 46 | Tang. 9 47 51 | | 9,237255 |
| ♀ Elong. | + 17 38 40 | ☉ Subtr. | 3 2 16 24 | Tang. 21 32 41 | | 9,596391 |
| | | | | Tang. 3 54 1 | | 8,833640 |
| ♀ Geo. Long. | 3 19 55 4 | Commut. | 1 13 5 22 | | | |
| ♀ Lat. Nor. | 1 19 21 | Half | 21° 22 41 | 17 38 40 ♀ Elongation. | | |
| | | | | Commut. 43 5 22 | Ar. Co. | 0,16549 |
| | | | | Elong. 17 38 40 | Sin. | 9,48160 |
| | | | | Inclinat. 2 58 42 | tang. | 8,71624 |
| | | | | ♀ Lat. 1 19 21 N. | tang. | 8.36333 |

EX-

# EXAMPLE II.

*Required, the Geocentric Place of the Planet* Jupiter, Dec. 3, $6^{h}$. $30^{m}$. *mean time, in the year* 1690.

| | ☉ M. Anom. | ☉ Apog. | ♃ M. long. | ♃ Aphel. | ♃ Node | Inclin. South |
|---|---|---|---|---|---|---|
| | ˢ ° ′ ″ | ˢ ° ′ ″ | ˢ ° ′ ″ | ˢ ° ′ ″ | ˢ ° ′ ″ | ° ′ ″ |
| 1690 | 6 12 55 43 | 3 7 28 3 | 11 13 7 16 | 6 9 21 48 | 3 7 25 50 | 1 18 58 |
| Dec. 3 | 11 2 8 51 | 0 56 | 28 0 58 | 1 6 | 46 | |
| Hour 6 | 14 47 | | 1 15 | | | |
| Min. 30 | 1 14 | 3 7 28 59 | 6 | 6 9 22 54 | 3 7 26 36 | |
| | | | | 6 1 46 41 | 9 3 53 56 | |
| ☉ M. Anom. | 5 15 20 35 | | 0 11 9 35 | ♃ M. Anom. | Arg. Latit. | |
| ☉ Apog. + | 3 7 28 59 | ♃ Profth. | + 10 57 | | | |
| | 8 22 49 34 | | 0 11 20 32 | Log. diſt. ♃ fr. ☉ | | 5,694521 |
| Profſt. | − 30 2 | Reduction | + 0 4 | Log. diſt. ⊖ fr. ☉ | | 4,992841 |
| ☉ Long. | 8 22 19 32 | ♃ H. long. fub. | 0 11 20 36 | Tang. 78° 45′ 31″ | | 10,701680 |
| ♃ Elong. + | 3 7 39 26 | From long. ☉ | 8 22 19 32 | − 45 | | |
| ♃ Geo. Long. | 11 29 58 58 | Commut. | 8 10 58 56 | 33 45 31 | tang. | 9,825034 |
| Lat. South | 1 22 47 | Half | 4 5 29 28 | 54 30 32 | tang. | 10,146874 |
| | | Its comp. to 6 fig. | 54 30 32 | 43 8 54 | tang. | 9,971908 |
| | | | | 97 39 26 | ♃ Elongation | |

| | | | |
|---|---|---|---|
| Commut. | 70 58 56 | Ar. Co. | 0,02437 |
| Elòngat. | 97 39 26 | fin. | 9,99611 |
| Inclin. | 1 18 58 | tang. | 8,36125 |
| Latit. ♃ | 1 22 47 S. | tang. | 8,38173 |

The Column entitled *Æquatio Secularis*, in the Table *Medii motus Jovis ab Æquinoctio in annorum centuriis* (B b b), contains Equations to be added to the mean heliocentric Longitude of *Jupiter* for every hundredth year preceding or following any Radical Year in the Table entitled *Epochæ mediorum motuum Jovis*. And the Column with the ſame Title in the Table *Medii motus Saturni in annorum centuriis* (D d d 4), contains Equations to be ſubtracted from the mean heliocentric Longitude of *Saturn* for every hundredth year preceding or following any Radical Year in the Table intitled *Epochæ mediorum motuum Saturni*.

PRE-

# PRAEFATIO.

PRODEUNT tandem celeberrimi Halleii Solis & Planetarum Tabulæ; typographo quidem Anno 1717 ab ipso traditæ, Annóque 1719 typis expressæ. Deerant tamen tabulæ quædam vulgares, & Præcepta calculi, cùm Auctor Anno 1720 Flamstedii in Observatorio regio Successor constitutus, earum editionem distulit, ut numerorum Lunarium errores ex propriis observationibus detegeret, & eorum Abacum simul cum tabulis in lucem daret. Hoc ut ab Astronomis fieret, diù sanè cupidissimè exoptaverat, ut inde æquationum Lunarium notiorum magnitudines accuratiùs innotescerent, & latentes adhuc æquationes detegerentur. Ipse tandem annum agens sexagessimum quartum, summo corporis & animi vigore fretus, quo ad id ætatis usus erat, opus hoc arduum aggressus est, & præter omnium expectationem absolvit. Observatorium instrumentis astronomicis omnino destitutum acceperat: illa quippe, quibus Flamstedius usus est, privati juris erant, & hæredes sequebantur. Anno tamen 1721 telescopium ad transitus siderum observandos nactus, ascensiones Lunæ rectas per annos quatuor continuos diligentissimè observavit, & cum tabularum suarum computo contulit: donec ingens ille Quadrans anno 1725 sumptibus publicis Observatorii muro affixus, longitudines Lunæ ex observationibus supputandi compotem reddidit; à die igitur Dec. 5to illius Anni, ad diem Dec. 27um anni 1739 longitudines Lunæ observatæ cum computo tabularum collatæ in observationum abaco inveniuntur.

Si Auctor noster has suas tabulas ipse edidisset, procul dubiò de observationibus, quibus ad eas condendas usus est, aliquid dixisset; fortasse etiam numerorum correctiones quasdam indicasset. Hæc quidem à nobis nequaquàm sunt expectanda. Pauca tamen monitum Lectorem volumus, quò magis æquum de illis ferat judicium.

Flamstedii observationibus præcipuè usus est noster, quæ quamvis magnâ diligentiâ factæ fuerunt, & summâ fide traditæ, pauciores tamen sunt, quàm quæ ad numeros Solares stabiliendos sufficiant. Hanc observationum inopiam sæpe cum amicis Halleius,



dum

*dum viveret, queſtus eſt. Hinc neque ſpeciem orbitæ terreſtris, neque poſitionem ejus, ſatis accuratè definire valuit; multò minus æquationes Apogæi ſolis, & alias quaſdam, quibus orbita terreſtris minimè immunis eſt, detegere potuit. Hæ nempe non niſi longâ multarum obſervationum ſerie deprehendi & definiri poſſunt: Adde, quod tùm temporis ignorabantur æquationes Aberrationis luminis fixarum, Præceſſionis æquinoctiorum, & Inclinationis axis terræ, quas omnes, mirâ in obſervando induſtriâ pariter ac ſagacitate, primus detexit ſummus ille aſtronomus Rev. Jacobus Bradleius, S.T.P. R.S.S. in Academiâ Oxonienſi Aſtronomiæ Profeſſor Savilianus, & Auctori noſtro in Obſervatorio regio Succeſſor digniſſimus. Hæ æquationes, licet parvæ ſint, errores tamen ſenſibiles in bonas obſervationes inducere valent, & Flamſtedium mirè torſerant. Cùm verò aſtronomia à Sole tota pendeat, ex erroribus ſolaribus errores in omnium Planetarum numeris producantur, neceſſe eſt.*

*De Auctoris noſtri labore & ſollertiâ in tabulis lunaribus condendis, judicabunt ii qui obſervationum multitudinem pænè infinitam ad tot æquationum magnitudines definiendas neceſſariam noverint. Et quanto cum candore in hiſce ſuis laboribus cum publico communicandis egerit, exinde patet; quod tabulas haſce tanquam exactas proponere nequaquam cogitavit; quinimò æquationes quaſdam penitùs omittere voluit, quoniam ad ipſas ſatis accuratè determinandas, nondum ſuppeterent obſervationes idoneæ; tum etiam errorum, quos in tabularum computo per octodecim annorum ſeriem obſervatione ſeduld deprehenderat, abacum confecit, & unà cum tabulis edere decrevit.*

*Catalogo Britannico ad Lunæ aſcenſiones rectas ex fixarum obſervatione indagandas uſus eſt Noſter, in quo fixarum quarundam loci minus accuratè determinati inveniuntur; &, ſi obſervationum ejus editionem ſperare liceret, fixas illas indicare, ut inde Lunæ loci ab illis derivati corrigerentur, operæ pretium foret. Utinam Auctor, dum viveret, illas edidiſſet; magni enim intereſt, ut Obſervationes aſtronomicæ publici juris fiant, quippe quæ nunquam, ut tabulæ, tractu temporis exoleſcant, ſed ſi diligenter factæ fuerint & bonâ fide traditæ, majorem utilitatem ex antiquitate ducunt: optandum propterea foret, ut ſumptibus publicis ſubindè ederentur obſervationes ab Aſtronomo regio factæ; quo enim magis ſedulus obſervator fuerit, eo magis publici intereſt ut ejus edantur obſervationes,*

*eòque*

*eòque minus privati hominis facultatibus impensæ ad illas edendas necessariæ conveniunt.*

*Numerorum Mercurialium correctiones edidit Auctor in Reg. Societatis Actis philosph. N.° 386, ubi Epocham motûs medii hujus planetæ ad annum Julianum 1723 ineuntem ♌ 19°. 9'. 31" statuit; motúmque medium in annis Julianis centum 2ˢ. 14°. 2'. 13", & Nodi ascendentis à primâ stellâ Arietis distantiam 0°. 15'. 41" invenit.*

*Satellitum jovialium tabulas Anno 1718 Halleio tradidit edendas Rev. J. Bradleius. Cum cælo tamen hodie minimè consentire deprehenduntur; quod Auctori non penitùs inexpectatum accidisse patet ex ipsius in easdem notis.*

*Synopsis astronomiæ cometicæ, eodem tempore quo tabulæ, typis expressa est. Observationum abacum variis temporibus typographo tradidit Auctor, dum observationibus incumberet.*

*Quid in hisce edendis à nobis præstitum sit, paucis nunc dicendum.*

*Deerant tabulæ mediarum conjunctionum Lunæ cum Sole, Refractionum, & Longitudinum & Latitudinum Urbium celebriorum; quas omnes suis locis inseruimus.*

*Tabulas mediarum conjunctionum, & Periodorum lunarium, summâ cum humanitate nobiscum communicavit Rev. J. Bradleius, à celeberrimo dum viveret Astronomo Rev. Dno. Poundio artificiosissimè constructas. Periodorum lunarium tabula, eclipsium revolutionibus indicandis est utilissima; ideoque abacum eclipsium quæ periodo 223 lunationum ab Anno 1701 ad annum 1718 contigére, quem cum æquationibus ad revolutionum tempora corrigenda, auctor huic usui destinaverat, & Periodum Plinianam* nuncupaverat, omisimus; utpote qui minùs accuratè revolutionum tempora repræsentaret, & post paucas periodos exactas inutilis fiat. Refractionum tabula ea est, quâ semper usus est Auctor. Urbium & Locorum eclipsibus antiquis, vel recentiorum observationibus præcipuè insignium Longitudines & Latitudines in tabulam conjecimus: utinam magis fidas observationes ad earum pleraſque stabiliendas haberemus. Elevationem Poli Observatorii Grenovicensis, quâ Flamstedius & Halleius usi sunt, retinuimus, quamvis minutis aliquot secundis verâ minorem eam credamus.*

* *Vid. Act. Philosoph. n.* 194. *p.* 535.

*Inv*

*In præceptis computi tradendis, methodum, quâ Halleius ipſe tabulis utebatur, ſcrupuloſè ſecuti ſumus, ne errores diverſi ab illis, qui in Abaco inveniuntur, proveniant. Si nempe æquatio Lunæ quarta poſt æquationem centri applicetur, vel rudis illa argumenti ejus correctio, quam in margine paginæ* (b) *4 indicavimus, negligatur, errorum differentia ad minuti unius primi ſemiſſem quandoque aſſurgere poteſt; quod errorum Abacum tabularum correctioni minùs utilem redderet. Hic tamen monendus eſt Lector, quod ex Halleii chartis comperimus, ipſum, in Limbi Lunæ aſcenſionibus rectis ex computo inveniendis, & in centri ejus longitudinibus ex obſervatione indagandis, ſemidiametro Lunæ apparente, veræ ejus ſemidiametri loco conſtanter uſum fuiſſe; indeque factum eſt, ut ab obſervationum initio uſque ad finem ferè anni* 1725, *à novilunio ad plenilunium dum præcedens Lunæ limbus obſervabatur, aſcenſiones ejus rectas ex computo inventas minores quàm oportuit, in Abacum retulerit, & à plenilunio ad novilunium dum limbus ſequens obſervabatur, majores: ab Anno verò* 1725, *longitudines centri Lunæ ex limbi præcedentis obſervationibus deductas, veris ejus longitudinibus majores exhibuerit; & ex limbi ſequentis obſervationibus, minores. Error quidem non magnus eſt, utpote quadrantem minuti unius primi rarò ſuperans; & in computis vulgaribus negligi poteſt, ideóque mentionem ejus nullam in præceptis fecimus. Quicunque verò motus Lunæ medios corrigere, vel æquationes reformare ſuſcipiat, errores in Abaco inventos, exceſſu ſemidiametri Lunæ apparentis ſecundùm Aſcenſionem rectam vel ſecundùm Longitudinem, ſupra ſemidiametrum ejus horizontalem ſecundùm eaſdem menſuras, corrigere debebit.*

*Brevitati quantùm licuit ſtuduimus; methodum tamen ad Longitudines terreſtres ex obſervationibus Lunæ inveſtigandas, in navigantium gratiam pluribus exemplis illuſtravimus.*

# De uſu Tabularum.

## MONITUM I.

### *De Tempore aſtronomico.*

TEMPUS illud quod apparens appellatur, à centri Solis per meridianum circulum tranſitu, ad ipſius in eundem meridianum reditum numeratur. In hoc nempe temporis ſpatio naturalis dies abſolvitur. Cùm verò hi dies ſint inter ſe inæquales, motus medii Solis & Planetarum ſatis aptè ad eos accommodari nequeunt. Ad tabulas itaque mediorum motuum condendas, finxêrunt aſtronomi diem medium ſeu æqualem, ad cujus meridiem medios motus in tabulis accommodant. Hunc in ſequentibus Meridiem æquatum vocabimus. Si igitur quæratur locus Solis vel Planetæ ad tempus quodvis apparens datum, convertendum eſt illud in tempus medium, ope Tabularum æquationis temporis (C c 3), & ad hoc tempus, medii motus in Tabulis quærendi ſunt.

## MONITUM II.

### *De Tabulis Epocharum.*

Solis & Planetarum motus medii in Epocharum tabulis, ad meridiem æquatum ultimi diei Decembris anni Juliani proximè præteriti exhibentur. Scilicet Anomalia media Solis in tabula Epocharum ad annum 1722, eſt ejus Anomalia media ad meridiem illum fictum diei 31 Decembris Anni 1721. Temporis autem computus ad meridiem Obſervatorii Regii Grenovicenſis accommodatus eſt.

## PRÆCEPTA CALCULI SOLIS.

### *Ad datum tempus Longitudinem Solis veram invenire.*

1. E Tabulis *Epocharum* (D d & ſeq.) & *Mediorum motuum Solis* (D d 3 & ſeqq.) colligantur Anomalia media & Longitudo Apogæi Solis ad annum, diem, & partem diei datam.

2. Anomaliæ Solis mediæ addatur longitudo Apogæi ejus, earum ſumma erit Solis longitudo media.

3. In tab. *Æquationum Solis* (E e 3) invenîatur æquatio anomaliæ Solis mediæ reſpondens. Hæc à Longitudine ejus mediâ ſubducta, vel eidem addita, ſecundùm tabulæ indicem, dabit veram Solis Longitudinem ad tempus medium tabularum.

4. Si tempus datum fuerit apparens, in tabula *Æquationis Temporis* priori (C c 3) quæratur æquatio quæ ad longitudinem Solis veram reſpondet; in altera, vero *Æquationis temporis* Tabula inveniatur ea quæ ad mediam ejus Anomaliam; harum ſumma ſi ambæ ſint addendæ vel ſubtrahendæ; vel differentia ſi altera addenda altera ſubtrahenda fuerit, erit æquatio temporis abſoluta, quâ augeatur vel minuatur tempus apparens datum, & ad tempus ſic correctum denùo quæratur locus Solis. Vel ſi additione aut ſubductione quantitatis motûs medii æquationi temporis abſolutæ proportionalis, corrigatur longitudo Solis vera prius inventa, habebitur quam proximè longitudo ejus vera ad tempus apparens datum. Tabula, quæ (C c 4) habetur, Æquationem temporis abſolutam ad veram Solis Longitudinem exhibet, & ex duabus prioribus componitur. Sed propter motum Apogæi Solis non eſt perpetua.

## EXEMPLUM.

### *Quæritur Longitudo Solis vera ad Meridiem 20 diei Januarii apparentem Anno 1722.*

In *Epocharum* tabula ad annum 1722 habentur Solis Anomalia media $6^s.\ 12^\circ.\ 37'.\ 56''$. & Longitudo Apogæi ejus $3^s.\ 8^\circ.\ 0'.\ 24''$, his addantur motus Anomaliæ mediæ pro diebus Jan. 20, $0^s.\ 19^\circ.\ 42'.\ 43''$, & Apogæi (cujus motus pro menſe completo habetur in imâ tabulâ) $3''$, fit media Solis Anomalia ad meridiem æquatum 20 Januarii $7^s.\ 2^\circ.\ 20'.\ 39''$, & longitudo Apogæi ejus $3^s.\ 8^\circ.\ 0'.\ 27''$. quarum ſumma $10^s.\ 10^\circ.\ 21'.\ 6''$ eſt Solis Longitudo media ad idem tempus. Proſthaphæreſis Solis ad $7^s.\ 2^\circ$ Anomaliæ mediæ eſt $1^\circ.\ 2'.\ 47''$, illa vero ad $7^s.\ 3^\circ$, eſt $1^\circ.\ 4'.\ 31''$, earum differentia $1'.\ 44''$. & cum creſcente Solis Anomalia media, creſcat etiam æquatio, æquationi harum minori $1^\circ.\ 2'.\ 47''$ addatur hujus differentiæ pars proportionalis $36''$ & fiet $1^\circ.\ 3'.\ 23''$ Proſthaphæreſis Solis ad Anomaliam mediam $7^s.\ 2^\circ.\ 20'.\ 39''$ reſpondens, quæ ſecundum tabulæ indicem Longitudini Solis mediæ addita dabit $\simeq 11^\circ.\ 24'.\ 29''$ Longitudinem ejus veram ad tabularum tempus medium. Quæratur nunc aquatio temporis, cujus pars quæ a Longitudine ſolis pendet invenietur in tabulâ priori ubi 9 m. 52 s. Longitudini ſolis $\simeq 11^\circ.\ 24'$ reſpondent; pars altera ad Anomaliam ejus mediam $7^s.\ 2^\circ.\ 20'$ eſt 4 m. 13 s. & cum ex indicibus tabularum ambæ ſint addendæ earum ſumma 14 m. 5 s. eſt æquatio temporis abſoluta, quâ tempus apparens auctum in medium convertetur. Ut habeatur igitur Solis vera Longitudo ad meridiem diei propoſiti apparentem, computus denuò inſtituendus eſt ad 14 m. 5 s. poſt meridiem tabularum æquatum. Vel ſi Longitudini ſupra inventæ addatur arcus $35''$ quem Sol ſpatio temporis 14 m. 5 s. medio ſuo motu percurrit, fiet $\simeq 11^\circ.\ 25'.\ 4''$. Longitudo ejus vera meridie apparente 20 Januarii Anno 1722, quam proximè.

Diagramma

## Diagramma Calculi.

| | ☉ Anom. med. | | | | Longit. Apogæi. | | | |
|---|---|---|---|---|---|---|---|---|
| | ♃ | ° | ′ | ″ | ♃ | ° | ′ | ″ |
| Anno 1722 | 6 | 12 | 37 | 56 | 3 | 8 | 0 | 24 |
| Jan. 20 | 0 | 19 | 42 | 43 | | | | 3 |
| | 7 | 2 | 20 | 39 | 3 | 8 | 0 | 27 |
| | 3 | 8 | 0 | 27 | | | | |
| ☉ Long. med. | 10 | 10 | 21 | 6 | | | | |
| Prosthaphæresis | + | 1 | 3 | 23 | | | | |
| ☉ Long. vera | ♒ | 11 | 24 | 29 | | | | |
| Pro. æq. temp. | | | + | 35 | | | | |
| | ♒ | 11 | 25 | 4 | | | | |

| | | m. | s. |
|---|---|---|---|
| Æquatio temp. prior | + | 9 | 52 |
| Æquatio temp. altera | + | 4 | 13 |
| Æq. temp. absoluta | + | 14 | 5 |

Long. ☉ vera Jan. 20, 1722, quam proximè.

Inventa Solis Longitudine vera, ejus Declinatio in tabula *Declinationum* (B b) habenda est, & Ascensio recta in tabula *Ascensionum rectarum* (B b 2 & seqq.)

## PRÆCEPTA CALCULI LUNÆ.

### *Tempus medium Syzygiarum ad Annum & Mensem datum invenire.*

1. E Tabulis *Epocharum mediarum Conjunctionum Solis & Lunæ*, (* E e & seq.) & e Tabulis *Revolutionum Lunæ ad Solem in mensibus anni communis* (* E e 4) colligantur dies & partes diei ad annum & mensem datum, unà cum Anomaliâ Solis mediâ & mediis Solis distantiis ab Apogæo Lunæ & Nodo. In annis Bissextilibus, post Februarium numerus dierum in Tabula mensium uno die minuendus est. Si quæratur Oppositio, dimidius mensis Synodicus tempori addendus est; & motus huic tempori respondentes, motibus etiam sunt addendi.

2. Ope Anomaliæ Solis mediæ capiantur è tabulis *Æquationum annuarum* (L l 3 & seq.) Æquationes Apogæi Lunæ & Nodi, quæ si secundum indices tabularum addendæ sunt, subducantur a mediis Solis ab Apogæo Lunæ & Nodo distantiis, & vice versâ; & habebitur ejus distantia ab utroque semel æquato. Prosthaphæresis Solis his addita vel subducta secundum indicem tabulæ dabit Argumentum Lunæ annuum & distantiam veram Solis a Nodo semel æquato.

3. Distantia Solis media ab apogæo Lunæ semel æquato, subducta a mediâ Solis anomaliâ, est in Conjunctionibus argumentum quartæ æquationis Lunæ: verum in Oppositionibus huic Argumento, itemque Argumento annuo, addenda sunt sex signa.

4. In Tabula *Æquationum annuarum Lunæ* (L l 3 & seq.) inveniatur æquatio ejus annua mediæ Solis Anomaliæ respondens. In tabula *Æquationis semestris alterius* (M m) ope Solis a Nodo distantiæ, inveniatur æquatio Lunæ tertia. In tabula *Æquationis Lunæ quartæ* (ibid.) inveniatur æquatio quarta ad argumentum huic æquationi proprium. In Tabula demum *Æquationum Lunæ in Syzygiis* (O o 3) inveniatur æquatio ad argumentum annuum respondens. Harum omnium æquationum summa, ubi tempus mediæ syzygiæ cum tempore veræ congruit, (quod rarò fit) Solis Prosthaphæresi æqualis erit. Ubi autem

vera

vera ſyzygia mediam præcedit, æquationum Lunarium ſumma Proſthaphæreſin ſolarem ſuperabit: & ubi media ſyzygia præcedit veram, Solis Proſthaphæreſis ſummam ſuperabit æquationum Lunarium. Differentia igitur inter hanc ſummam & Proſthaphæreſin ſolarem, ope Tabulæ *Motus horarii Lunæ a Sole* (** Ee 2) dabit tempus inter ſyzygiam mediam & veram, quam proximè.

## EXEMPLUM I.

*Quæritur tempus medium Novilunii menſe Julio Anno* 1684.

| | Conj. media. D h m s | ☉ Anom. med. s o ′ ″ | ☉ ab Apog. ☽ s o ′ ″ | ☉ à ☋ s o ′ ″ |
|---|---|---|---|---|
| 1684. | 6 13 22 38 | 6 18 57 15 | 9 19 6 8 | 6 0 25 39 |
| Jun. Biſſ. | 25 4 24 18 | 5 24 37 56 | 5 4 54 3 | 6 4 1 24 |
| Julii | 1 17 46 56 | 0 13 35 11 | 2 24 0 11 | 0 4 27 3 |
| Pro. diff. Æq. | + 8 54 6 | −2 24 4 47 | + 4 36 | — 2 11 |
| 6 Julii | 2 2 41 2 | 9 19 30 24 | 2 24 4 47 | 0 4 24 52 |
| | | Arg. 4. Æq. | — 26 47 | — 26 47 |
| | | | 2 23 38 0 | 0 3 58 5 |
| | | | Arg. Annuum. | ☉ à ☋ |

| | | o ′ ″ |
|---|---|---|
| 1 Æq. ☽ | + | 0 2 41 |
| 3a | — | 0 0 6 |
| 4ta | — | 0 2 16 |
| Æq. in ſyz. | — | 4 58 24 |
| Summa | — | 4 58 5 |
| Proſth. ☉ | — | 0 26 47 |
| Diff. | | 4 31 18 |
| Horæ 8 | = | 4 3 49 |
| | | 27 29 |
| Min. 54 | = | 27 26 |
| Sec. 6 | = | 0 3 |

Tempus igitur Conjunctionis medium menſe Julio Anno 1684 fuit Die 2. hor. 2. min. 41.

## EXEMPLUM II.

*Quæritur tempus medium Plenilunii menſe Auguſto Anno* 1681.

| | Conj. media. D h m s | Anom. med. s o ′ ″ | ☉ ab Apog. ☽ s o ′ ″ | ☉ a ☋ o s ′ ″ |
|---|---|---|---|---|
| 1681. | 8 22 12 45 | 6 22 3 19 | 1 23 52 52 | 4 5 37 4 |
| Julii | 25 17 8 21 | 6 23 44 15 | 6 0 43 3 | 7 4 41 38 |
| ½ Menſ. ſyn. | 14 18 22 2 | 0 14 33 10 | 0 12 54 30 | 0 15 20 7 |
| Auguſti | 18 9 43 8 | 2 0 20 44 | 8 7 30 25 | 11 25 38 49 |
| Pro. diff. æq. | + 5 36 | −8 7 47 37 | + 17 12 | — 8 11 |
| 8 Aug. | 18 15 19 | 5 22 33 7 | 8 7 47 37 | 11 25 30 38 |
| | | + 6 | — 1 40 2 | — 1 40 2 |
| | | 11 22 33 7 | 8 6 7 35 | 11 23 50 36 |
| | | Arg. 4tæ Æq. | Arg. Ann. | ☉ à ☋ |
| | | | + 6 | |
| | | | 2 6 7 35 | |
| | | | Arg. Æqq. in ſyz. | ☋ |
| | | | | D h m |

| | | o ′ ″ |
|---|---|---|
| 1 Æq. Lunæ | + | 0 10 9 |
| 3a | + | 0 0 10 |
| 4ta | — | 0 0 19 |
| Æq. in ſyz. | — | 4 40 41 |
| Summa | — | 4 30 41 |
| Proſth. ☉ | — | 1 40 2 |
| Diff. | | 2 50 39 |
| Horæ 5 | = | 2 32 23 |
| Min. 36 | = | 18 16 |

Tempus igitur Oppoſitionis medium fuit Aug. 18 15 19

Tempora hoc modo inventa paululum a veris ſyzygiarum temporibus aberrabunt, & corrigenda ſunt inveniendo locum Lunæ verum ope *Tabularum Anomaliſticarum* (Ff & ſeqq.) per præcepta ſequentia.

*Locum*

## *Locum Lunæ verum ad datum Conjunctionis vel Oppositionis tempus medium invenire.*

1. Inveniatur Longitudo Solis vera ad datum tempus, & capiatur Anomalia ejus media ad minuta tertia.

2. In tabulis *Epocharum mediorum motuum Lunæ existente Terra in Aphelio* (F f & seq.) inveniantur mediæ Longitudines Lunæ, Apogæi ejus, & Nodi, ad tempus Aphelii proxime præcedens tempus datum.

3. E Tabulis *Mediorum motuum ad gradus Anomaliæ Solis mediæ* (F f 4 & seqq.) capiantur motus medii Lunæ, Apogæi ejus, & Nodi, ad mediam Solis anomaliam respondentes. Addantur hi Lunæ & Apogæi motus, Longitudinibus prioribus, & subducatur ille Nodi a Longitudine priori, & habebimus Lunæ, Apogæi ejus, & Nodi Longitudines ad tempus datum, semel æquatas.

4. Distantia Solis a Nodo Lunæ semel æquato, est argumentum tertiæ æquationis Lunæ, quæ *semestris altera* appellatur (M m). Longitudo Apogæi Solis a Longitudine Apogæi Lunæ subducta, argumentum est quartæ æquationis in Conjunctionibus (ibid); in Oppositionibus autem hoc Argumentum sex Signis augendum est. Argumentum annuum in Conjunctionibus, & idem sex Signis auctum in Oppositionibus est argumentum *Æquationum Lunæ in Syzygiis* (O o 3). Hisce Æquationibus obtinebitur locus Lunæ verus in Orbitâ propriâ.

5. Longitudo Nodi a loco Solis supra invento subducta, Argumentum Latitudinis in Syzygiis appellatur, cujus ope Latitudo Lunæ, & Reductio loci ejus in orbitâ propriâ ad Eclipticam, in *Tabulâ Latitudinariâ Lunæ in Syzygiis* (O o 4) inveniuntur.

6. Si tempus datum ab illo veræ Syzygiæ aberraverit, satis tutò corrigetur ope Tabulæ *Motus horarii Lunæ a Sole* (* * E e 2).

## EXEMPLUM I.

### *Quæritur Locus Lunæ ad tempus Novilunii supra inventum Mens. Jul. die* 2. *h.* 2. *min.* 41. *Anno* 1684.

| | ☉ An. media. s ° ′ ″ ‴ | ☉ Apogæum. s ° ′ ″ | | ☽ Apog. s ° ′ ″ | ☽ ☒ s ° ′ ″ |
|---|---|---|---|---|---|
| B. 1684 | 6 12 29 28 46 | 3 7 21 59 | | | |
| Jul. 2 | 6 1 21 2 3 | 30 | ☽ ab Æq. s ° ′ ″ | | |
| Hor. 2 | 4 55 41 | | | | |
| Min. 41 | 1 41 1 | 1684 | 9 19 19 19 | 0 25 25 13 | 3 17 14 22 |
| | | Anom. ☉ 13° | 5 23 50 19 | 1 23 46 | 39 49 |
| ☉ An. med. | 0 13 57 7 31 | 57′ | 12 42 2 | 6 27 | 3 4 |
| Apog. | 3 7 22 29 | 7″ | 1 33 | | |
| | | 31‴ | 7 | | |
| ☉ Long. med. | 3 21 19 36 | | | | |
| Prostaph. | — 27 29 | | 3 25 53 20 | 0 26 55 26 | 3 16 31 29 |
| | | Æq. 3a | — 0 7 | 9 19 32 57 | 0 5 20 38 |
| ☉ Long. | 3 20 52 7 | 4ta | — 2 16 | Arg. 4tæ Æq. | ☉ a ☒ |
| | | Æq. in Syz. | — 4 58 28 | 2 23 56 41 | ° ′ ″ |
| | | | | Arg. Ann. | 0 22 47 |
| | | ☽ | 3 20 52 29 | | Lat. ☽. |
| | | ☉ | 3 20 52 7 | | |
| | | Differentia | 0 0 0 22 | | |



Lunæ

Luna igitur conjunctionis punctum præterierat arcu 22 minutorum ſecundorum, & conjunctio vera præceſſit tempus datum 44 minutis ſecundis horariis, circiter; in hoc nempè temporis ſpatio Luna motu ſuo medio a Sole arcum talem percurrit. Conjunctio igitur vera fiebat hor. 2. min. 42. ſec. 26. temporis medii.

Æquatio temporis abſoluta tum temporis fuit $4^m.\ 58^s.$ ſubducenda; addatur illa tempori medio hic invento, & habebitur $2^h.\ 45^m.\ 24^s.$ Novilunii veri tempus apparens.

## EXEMPLUM II.

*Quæritur locus Lunæ verus ad tempus Plenilunii ſupra inventum Aug. 18. 15h. 19m. 1681.*

| | ☉ Anom med. s ° ′ ″ ‴ | ☉ Apog. s ° ′ ″ | ☽ Long. med. s ° ′ ″ | ☽ Apog. s ° ′ ″ | ☽ ☊ s ° ′ ″ |
|---|---|---|---|---|---|
| 1681. | 6 13 15 29 56 | 3 7 18 57 | | | |
| Aug. 18. | 7 16 41 17 34 | 38 | | | |
| Hor. 15. | 36 57 36 | | | | |
| Min. 19. | 46 49 | 3 7 19 35 | | | 5 15 16 0 |
| | | 1681 | 8 10 54 55 | 8 23 20 30 | 3 5 16 |
| ☉ An. med. | 2 0 34 31 55 | Sig. 2. | 2 22 18 8 | 6 29 48 | 1 50 |
| Apog. | 3 7 19 35 | Min. 34. | 7 34 33 | 3 51 | 2 |
| | | Sec. 31. tert. 55 | 7 7 | 4 | |
| ☉ Long. med. | 5 7 54 7 | | 11 10 54 43 | 8 29 54 13 | 5 12 8 52 |
| Proſtaph. | — 1 40 16 | Æq. 3ta | + 0 10 | | 5 24 4 40 |
| ☉ Long. | 5 6 13 51 | Æq. 4ta | — 0 19 | | Arg. Lat in Syz. 8. |
| | | Æq. in Syz. | — 4 41 2 | | 0 31 2 |
| | | ☽ | 11 6 13 32 | | Lat. ☽ |
| | | ☉ | 5 6 13 51 | | |
| | | Diſtantia ☽ à ☉ | 6 0 0 19 | | |

Luna igitur ad tempus datum diſtabat ab oppoſitione arcu $19''$, quem motu ſuo medio a Sole, tempore 38 minutorum ſecundorum percurrit. Fiebat itaque Oppoſitio vera $15^h.\ 19^m.\ 38^s$ temporis medii, quàm proximè.

## *Tempus medium Syzygiarum ad Annum & Menſem ante Æram Chriſtianam datum invenire.*

1. Centuriæ decimæ octavæ nunc currentis, iſtum Annum ſelige, qui, ſi annis ante Chriſtum datis, uno dempto, addatur, integrum efficiet centuriarum numerum.

2. Quæratur hic numerus in tabula pro *Centuriis annorum* (** E e) & tempora & motus huic reſpondentes, a temporibus & motibus, anno iſti Centuriæ decimæ octavæ in Epocharum tabulâ (* E e & ſeqq.) reſpondentibus ſubducantur; & obtinebitur tempus medium primæ conjunctionis mediæ in anno ante Chriſtum dato, cum motibus eidem reſpondentibus. Quibus datis invenietur tempus Conjunctionis vel Oppoſitionis in dato menſe, per præcepta ſupra tradita.

Si Annus in Epocharum tabulâ inventus Biſſextilis fuerit, Annus etiam datus Biſſextilis erat.

E X-

# EXEMPLUM.

*Quæritur tempus medium Conjunctionis Lunæ cum Sole in menſe Maio, anno ante Chriſtum 585.*

Annis 584
Addantur 1716

Fiunt 2300 Integer Centuriarum numerus.

| | D h m s | ☉ Anom. med. s ° ′ ″ | ☉ ab Apog. ☽ s ° ′ ″ | ☉ à ☊ s ° ′ ″ | | ° ′ ″ |
|---|---|---|---|---|---|---|
| 1716. | 12 16 6 46 | 6 24 41 0 | 2 12 33 ♇ | 2 25 57 37 | | |
| 2300 ſubd. | 11 5 57 54 | 11 19 46 54 | 1 5 58 33 | 7 25 26 59 | | |
| | 1 10 8 52 | 7 4 54 6 | 1 6 34 28 | 7 0 30 38 | 1 Æq. Lunæ | + 0 0 5 |
| Maii Biſſ. | 26 15 40 15 | 4 25 31 37 | 4 9 5 2 | 5 3 21 10 | 3a | — 0 0 6 |
| | | | | | 4ta | — 0 0 37 |
| | 28 1 49 7 | 0 0 25 43 | 5 15 39 30 | 0 3 51 48 | Æq. in Syzygiis | — 1 8 35 |
| | + 2 14 35 | 6 14 46 4 | + 9 | — 4 | | |
| | | | — 51 | — 51 | Summa | — 1 9 13 |
| ♂ Maij | 28 4 3 42 | Arg. 4tæ Æq. | | | ☉ Proſtaph. | — 0 0 51 |
| | | | 5 15 38 48 | 0 3 50 53 | | 1 8 22 |
| | | | Arg. Annuum. | ☉ à ☊ | Horæ 2 | 1 0 57 |
| | | | | | Min. 14. ſec. 35. | 0 7 25 |

Simili modo invenietur locus Lunæ verus ex tabulis anomaliſticis; dum verò motus cæteri pro centuriis annorum ſubducantur, Longitudo Nodi pro Annorum centuriis, Epochali Longitudini centuriæ decimæ octavæ addenda eſt. Ut in Exemplo ſequenti.

# EXEMPLUM.

*Quæritur locus Lunæ verus ad tempus medium ſuperiori exemplo inventum.*

| | ☉ Anom. med. s ° ′ ″ ‴ | ☉ Apog. s ° ′ ″ | ☽ Long. med. s ° ′ ″ | ☽ Apog. s ° ′ ″ | ☽ ☊ s ° ′ ″ | |
|---|---|---|---|---|---|---|
| 1716. | 6 12 11 41 41 | 3 7 54 20 | 7 8 59 37 | 8 7 35 37 | 6 28 17 2 | |
| 2300 ſub. | 11 8 41 42 40 | 1 8 45 33 | 5 15 8 35 | 11 23 42 30 | 6 27 25 50 | addend. |
| | 7 3 29 59 1 | 1 29 8 47 | 1 23 51 2 | 8 13 53 7 | 1 25 42 52 | |
| Maii 28 B | 4 26 51 16 20 | 25 | | | | |
| Hor. 4 | 9 51 22 | | | | | |
| Min. 3. 42″. | 9 5 | ☉ Anom 31′ | 6 54 26 | 3 30 | 1 40 | |
| | | 15″ 48‴ | 3 31 | 2 | 1 | |
| | 0 0 31 15 48 | | | | | |
| ☉ Apog. | 1 29 9 12 | | 2 0 48 59 | 8 13 56 39 | 1 25 41 11 | |
| | | Æq. 3a | — 0 0 6 | 5 15 42 47 | | |
| | 1 29 40 28 | 4ta | — 0 0 37 | Arg. Annuum | ☽ Ap. 8 13 56 39 | |
| Proſth. | — 1 2 | Æq. in Syz. | — 1 8 15 | | ☉ Ap. 1 29 9 12 | |
| ☉ | 1 29 39 26 | ☽ | 1 29 40 1 | | | 6 14 47 27 |
| | | ☉ | 1 29 39 26 | | | Arg. 4tæ Æq. |
| | | Diff. | 0 0 0 35 | | | |

Luna igitur præterierat Conjunctionem arcu 35′′.

*Al*

## *Ad datum quodvis tempus Locum Lunæ invenire.*

1. Inveniatur ad tempus datum Longitudo Solis vera.

2. E Tabulis *Epocharum Mediorum motuum Lunæ, Apogæi ejus & Nodi Annis Julianis ineuntibus* (H h 4 & ſeq) & e tabulis *Mediorum motuum ad dies menſium, &c.* ( I i 3 & ſeqq), colligantur ad tempus medium datum, Longitudines, Lunæ, Apogæi ejus, & Nodi, mediæ. Et notandum eſt, quod medii motus Nodi pro menſibus, diebus, & diei partibus, quibus tempus datum anni ineuntis Epocham ſuperat, ſubducendi ſunt ab ejus Longitudine in Epocharum tabulâ inventâ.

3. In tabulis *Æquationum annuarum* (L l 3 & ſeq.) inveniantur æquationes Lunæ, Apogæi ejus, & Nodi, mediæ Solis Anomaliæ reſpondentes, & mediis eorum Longitudinibus addantur, vel ab iis ſubducantur, ſecundum tabularum indices.

4. Argumentum ſecundæ Æquationis Lunæ (M m), (quæ & *Prima ſemeſtris* vocatur) eſt diſtantia Solis ab Apogæo Lunæ, & Argumentum annuum appellatur.

5. Argumentum tertiæ Æquationis (ibid.) (quæ *Semeſtris altera* nuncupatur) eſt Solis a Nodo Lunæ diſtantia.

6. Pro Argumento *quartæ Æquationis* (ibid) Longitudo Apogæi Solis ad Argumentum Annuum addenda, & hæc ſumma a Lunæ Longitudine jam ter æquatâ ſubducenda. Cum vero hæc æquatio ſit ſecundum Neutonum ſexta, augeri vel minui debet ejus argumentum, æquatione Centri Lunæ. *

7. In tabulâ *Æquationum Apogæi & Excentricitatum Orbis Lunæ* (M m 2 & ſeqq) habentur ad Argumentum annuum reſpondentes, Æquatio ſecunda Apogæi Lunæ, Orbitæ ejus excentricitas, & Logarithmus pro Æquatione Centri Lunæ.

8. Longitudo Apogæi Lunæ iterum æquata, ſubducta a Lunæ Longitudine jam quartum æquatâ, dat ejus Anomaliam mediam; quæ quando ſex Signis minor eſt, Argumentum erit *Tabulæ pro expediendo calculo Centri Lunæ* (N n & ſeqq.) ſi vero ſex Signa ſuperaverit, Complemento ejus ad Signa duodecem utendum eſt. Ex hac tabulâ, ad hoc Argumentum, tum etiam ad Logarithmum pro æquatione Centri Lunæ reſpondens, capiatur æquatio; quâ augeatur vel minuatur (ſecundum indicem tabulæ) dimidius angulus mediæ Anomaliæ (vel ejus complementi ad Signa duodecem); hujus anguli ſic correcti tangens logarithmica, logarithmo pro invenienda æquatione Centri Lunæ addita, dabit tangentem logarithmicam dimidii Anguli Anomaliæ veræ. Et differentia inter mediam & veram Anomaliam eſt æquatio Centri; ſubducenda quando Lunæ Anomalia media ſex Signa non ſuperat, ſi ſuperet addenda.

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* Ut corrigatur Argumentum quartæ Æquationis, ſubducatur Longitudo Apogæi ſemel æquata a Lunæ Longitudine, & capiatur reſiduum pro Anomaliâ Lunæ mediâ. In tabula *Æquationis Apogæi et Exentricitatis Lunæ* (M m 2 & ſeqq) quæratur *Logarithmus pro æquatione Centri Lunæ*, qui Tangenti logarithmicæ Anguli dimidii Anomaliæ Lunæ mediæ addatur. Summa erit tangens Anguli, cujus duplum ab angulo Anomaliæ mediæ ſubductum, dabit Argumenti hujus correctionem. Argumento ſubducenda ſi Anomalia Lunæ media ſex Signis minor fuerit, eidem vero addenda ſi totidem Signa ſuperaverit. In Exemplo ſequente

| | s ° ′ | | ° ′ | |
|---|---|---|---|---|
| Pro Lunæ Anomalia media habebitur | 4 18 48 | ejus dim. | 69 24 | 10.4249 |
| Log. pro æquatione Centri Lunæ | s ° ′ | | | 9.9422 |
| Angulus cujus duplum eſt | 4 13 32 | | 66 46 | 10.3671 |
| Correctio detrahenda | — 5 16 | | | |

9. A Longitudine Lunæ jam quinquies æquatâ ſubducatur Solis Longitudo vera, & in tabulâ *Variationis ſive Reflectionis Lunæ* (N n 4) inveniatur huic argumento reſpondens, Variatio Lunæ ad mediam Terræ a Sole diſtantiam; hujus Logarithmo logiſt. addatur Logarithmus in tabulâ *Logarithmorum pro correctione Variationis* (ibid) Anomaliæ mediæ Solis repſondens; eorum ſumma erit Logarithmus logiſt. Variationis veræ: quâ aucta vel diminuta (ſecundum tabulæ indicem) Longitudo Lunæ quintùm æquata, fiet Longitudo ejus vera in Orbitâ propriâ.

10. In *Tabulâ pro computo Latitudinis Lunæ* (O o) inveniantur, Æquatio Nodi ſecunda, Sinus maximæ inclinationis logarithmicus & Reductio maxima; omnes ad diſtantiam Solis a Nodo medio reſpondentes. Longitudo Nodi jam ſemel æquata, hâc demum Æquatione aucta vel diminuta, ſecundùm indicem tabulæ, ſubducta a verâ Lunæ Longitudine in Orbitâ propriâ Argumentum Latitudinis appellatur.

Sinui logarithmico maximæ inclinationis addatur ſinus logarithmicus Argumenti Latitudinis; ſumma, dempto radio, eſt Latitudinis Lunæ ſinus logarithmicus; quæ cum argumentum Latitudinis minus ſex Signis fuerit, Borealis eſt; Auſtralis autem, cum totidem Signa ſuperaverit.

Logarithmo logiſtico maximæ Reductionis, addatur Sinûs dupli argumenti Latitudinis complementum arithmeticum, eorum ſumma eſt Logarithmus logiſticus Reductionis veræ, quæ a Longitudine Lunæ in orbitâ propriâ, in primo & tertio Argumenti Latitudinis quadrante ſubducta, vel eidem in ſecundo & quarto addita, dabit Lunæ Longitudinem Eclipticam.

11. In tabulâ *Parallaxium Lunæ horizontalium in Syzygiis* (O o 2) inveniatur Parallaxis tam Anomaliæ Lunæ veræ, quàm Orbitæ ſuæ excentricitati reſpondens, hujus Logarithmus logiſticus, Logarithmo e *Tabulâ pro Parallaxi extra Syzygias ad diſtantiam Lunæ a Syzygiâ propiore* (ibid.) addatur; eorum ſumma eſt Logarithmus logiſticus Parallaxis Lunæ horizontalis veræ.

12. Parallaxis Lunæ horizontalis, eſt ad ejus Diametrum, in ratione 60 ad 33. Addendo igitur Logarithmum logiſt. minutorum 33 (2596) Logarithmo logiſtico Parallaxis Lunæ horizontalis ſupra inventæ, fit Logarithmus logiſticus diametri Lunæ horizontalis.

Lunæ Diameter horizontalis aucta in ratione coſinûs Latitudinis Lunæ ad Radium menſuram dabit Diametri ejus veræ ſecundum Longitudinem. Si verò in ratione coſinûs Declinationis ad Radium augeatur, ejuſdem menſuram dabit ſecundùm Aſcenſionem rectam.

Diameter Lunæ horizontalis ope tabulæ *Aug. Diam. Lunæ* (O o 5) pro diſtantiâ Lunæ a vertice aucta, (prout Luna magis vel minus ab Apogæo ſuo diſtaverit) fiet Diameter ejus apparens; quæ aucta in ratione coſinûs Latitudinis ad Radium menſuram dabit Diametri apparentis ſecundùm Longitudinem; vel ſi in ratione coſinûs Declinationis ad Radium augeatur, ejuſdem menſuram ſecundùm Aſcenſionem rectam dabit.

# EXEMPLUM.

Anno 1725 Dec. 5to, præcedens Lunæ Limbus, obſervante Halleio Meridianum Obſervatorii Grenovicenſis tranſiit $9^h.\ 8^m.\ 5^s$ temporis medii, cum Aſcenſione rectâ 42°. 26′. 15″, & Limbi inferioris a vertice diſtantiâ 34°. 9′. 15.

*Quæritur locus Lunæ ad idem tempus ſecundùm Tabulas.*

| | ☉ Anom. med. | ☉ Apogæum. | ☉ Long. vera. |
|---|---|---|---|
| | s ° ′ ″ | s ° ′ ″ | s ° ′ ″ |
| | 5 17 20 40 | 3 8 4 22 | 8 24 59 2 |
| | ☽ Long. med. | ☽ Apogæum. | ☊ Lunæ. |
| | s ° ′ ″ | s ° ′ ″ | s ° ′ ″ |
| 1725 | 8 19 36 54 | 7 24 56 18 | 1 13 11 2 |
| Dec. 5. | 4 26 47 52 | 1 7 46 2 | 17 57 7 |
| Hor. 9 | 4 56 28 | 2 30 | 1 12 |
| Min. 8. ſec. 5. | 4 26 | 2 | 1 |
| | 1 21 25 40 | 9 2 44 52 | 0 25 12 42 |
| Æqq. annuæ | + 2 38 | — 4 28 | + 2 7 |
| | 1 21 28 18 | 9 2 40 24 | 0 25 14 49 |
| Æq. 2 a + 1′ 0″ | — 1 22 | — 2 41 0 | + 1 19 7 |
| 3 a — 0 41 | | | |
| 4 a — 1 41 | | | |
| | 1 21 26 56 | 8 29 59 24 | 0 26 33 56 |
| Æq. Centri | — 5 3 56 | 4 21 27 32 ☽ Anom. med. | 1 15 46 45 ☽ |
| | 1 16 23 0 | | 0 19 12 49 Arg. Lat. |
| † Variatio | — 36 15 | ½ Anom med. 0 ′ ″ 7 0 43 46 | |
| | 1 15 46 45 | — 1 47 | |
| ‡ Reductio | — 4 11 | | |
| ☽ Long. Eclipt | ♉ 15 42 34 | 7 0 41 59 tan 10.455683 | |
| * ☽ Lat. Bor. | 1 39 57 | Log. pro Æq. centri 9.942214 | |
| | | 68 11 48 tan 10.397897 | |
| | | 4 s 16 23 36 ejus duplum | |
| | | 5 3 56 Æq. Centri ſubd. | |

Æqq. Argumenta.
s ° ′
5 17 20. ☉ An. med.
Arg. Æqq. Annuarum.

8 24 59 2 ☉
9 2 40 24 ☽ Apog.
11 22 18 38
Arg. Annuum.

Excentr. 066429

8 24 59 ☉
0 25 15 ☊
7 29 44
Arg. 3æ Æq.

3 8 4 ☉ Apog.
11 22 18 Arg. Ann.
3 0 22
1 21 28 ☽
10 21 6
— 5 16 correctio
10 15 50
Arg. 4tæ Æq.

1 16 23 ☽
8 24 59 ☉
4 21 24 ☽ à ☉
Arg. Variationis.

† ☽ Variatio ſimplex — 34′ 18″ L L 2430
Correctio è tabulâ 9.9758
☽ Variatio vera — 36 15 L L 2188

‡ Reductio max. — 6′ 44″ L L 9499
S. dupl. Arg. Lat. C A 2065
Red. vera — 4 11 L L 11564

* Inclin. ſin Log. 8 94616
Arg. Lat. ſ. Log. 9.51732
☽ Lat. bor. ° ′ ″ 1 39 57 8.46348

*Inveniatur*

| | | | ° | ′ | ″ |
|---|---|---|---|---|---|
| Parallaxis Lunæ horizontalis in Syzygiis ad Anomaliam Lunæ veram 4ˢ. 16°. 23′ & ad excentricitatem 0664 eſt 60′. 3″ cujus Logarithmus logiſticus eſt — | — 3 | | | | |
| Ad Diſtantiam ☽ à ☉ 4ˢ. 21°. 24′ (vel 1ˢ. 8°. 36′ ab Oppoſitione) logarithmus pro Parallaxi extra Syzygias eſt | 24 | | | | |
| Horum ſumma eſt Log. log. Parallaxis horizontalis veræ | 21 | = | 0 | 59 | 43 |
| Cui addendo Logarithmum conſtantem — — | 2596 | | | | |
| habemus Log. log. Diametri Lunæ horizontalis — | 2617 | = | 0 | 32 | 50 |
| Lunæ limbi inferioris diſtantia a vertice obſervata erat | | | 34 | 9 | 15 |
| addatur Refractio — — — — | | | + | 0 | 36 |
| & habebitur diſtantia ejus à vertice a Refractione purgata | | | 34 | 9 | 51 |
| logarithmo log. Parallaxis horizontalis veræ, ſupra invento | 21 | | | | |
| addatur compl. arith. ſinûs diſtantiæ limbi Lunæ a vertice correctæ — — — — | 2506 | | | | |
| ſumma erit log. log. Parallaxis altitudinis Limbi Lunæ | | | | | |
| * inferioris — — — — — | 2527 | = | 0 | 33 | 32 |
| hæc a diſtantiâ limbi Lunæ a vertice correctâ, ſubducta, dabit veram ejus a vertice diſtantiam — — | | | 33 | 36 | 19 |
| ſubducatur etiam ſemidiameter Lunæ horizontalis — | | | | 16 | 25 |
| reſiduum erit vera centri Lunæ a vertice diſtantia — | | | 33 | 19 | 34 |
| huic addatur Latitudinis Obſervatorii complementum | | | 38 | 31 | 30 |
| & habebitur centri Lunæ vera a Polo boreo diſtantia — | | | 71 | 51 | 24 |
| Logarithmo log. diametri Lunæ horizontalis — | 2617 | | | | |
| addatur coſinus log. Declinationis Lunæ — — | 9778 | | | | |
| ſumma erit Log. log. veræ diametri Lunæ ſecundùm Aſcenſionem rectam — — — | 2395 | = | 0 | 34 | 34 |
| Aſcenſioni rectæ limbi Lunæ præcedentis obſervatæ — | | | 42 | 26 | 15 |
| addatur ſemidiameter Lunæ vera ſecundùm Aſcenſionem rectam | | | 0 | 17 | 17 |
| ſumma erit Aſcenſio recta centri Lunæ vera — — | | | 42 | 43 | 32 |

Aſcenſione Lunæ rectâ 42°. 43′. 32″, & diſtantiâ ejus a Polo Boreo 71°. 51′. 24″ datis, invenietur ejus Longitudo Ecliptica ♉ 15°. 42′. 12″, cum Latitudine Boreâ 1°. 38′. 37″.

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* Cum Parallaxis altitudinis ſit in ratione ſinûs diſtantiæ a Vertice apparentis; ſi diſtantia apparens non detur, augenda erit diſtantia vera ex conjecturâ, & inde quærenda Parallaxis altitudinis. Nempe ſi diſtantia a vertice vera pro apparente ſumatur, & inde parallaxis altitudinis inveniatur, diſtantia illa vera hac Parallaxi aucta pro apparente uſurpari poteſt, & Parallaxis inde inventa, a verâ quàm minimùm aberrabit.

## *De Lunæ computo corrigendo.*

Sicubi Tabulæ a cælo longiùs aberrent, corriguntur ope Errorum Abaci, qui in *Obſervationum tabulis* (☾ b & ſeqq) habetur. Errores enim ejuſdem ferè magnitudinis poſt exactum annorum 18 cum diebus 11. $7^h. 43^m. 20^s$ Periodum recurrent.

Ut igitur invenietur dies in Errorum Abaco tempori culibet dato reſpondens addatur hæc Periodus (vel ejus multiplum, vel Periodus Lunationum 111, quæ in tabulâ *Periodûm Lunarium* ✝ (** E e 4) habentur) tempori dato, vel ab eodem ſubducatur, prout tempus illud Annos in Obſervationum tabulis præceſſerit vel ſecutum fuerit, ut ſumma vel reſiduum incidat in annum in illis tabulis inveniendum; & ad diem hoc modo inventum, habebitur in Errorum Abaco, error computi ad tempus datum. Et notandum eſt, quod harum Periodûm illæ quæ diverſum annorum biſſextilium numerum admittunt, tempora periodica unius diei ſpatio ſeriùs quam oportet quandoque repræſentabunt. Periodus ſcilicet menſium 223 Synodicorum, eſt Annorum 18 cum diebus 11. $7^h. 43^m$ $20^s$, quando non plures 4 Annis biſſextilibus in ea numerantur; verùm ubi 5 biſſextiles in ſe continet, complebitur in Annis 18. $10^d. 7^h. 43^m. 20^s$.

## EXEMPLUM.

### *Quæritur tempus tranſitûs limbi Lunæ ſequentis per Meridianum Grenovicenſem Die 28vo. Decembris, Anno 1745.*

Subductis a dato tempore annis 18 cum diebus 10 (quinque enim anni biſſextiles in hac Periodo numerantur) habebitur Decembris dies 18vus Anni 1727, ad quem diem in Obſervationum tabulâ invenietur tempus tranſitûs limbi lunæ obſervati $13^h. 45^m. 21^s$. Anni 18 cum diebus 10 a plenâ Perodio $7^h. 43^m. 20^s$ deficiunt; et in hoc temporis ſpatio, Luna motu ſuo medio arcum $4°. 14'. 22''$ perrcurrit, qui $16^m. 55^s$ in meridiano tranſeundo inſumit. Subducantur igitur $16^m. 55^s$ a tempore obſervationis, & habebitur $13^h. 28^m. 26^s$ tempus tranſitûs limbi Lunæ ſequentis per Meridianum Grenovicenſem die Decembris 28vo Anni 1745.

Ad hoc tempus Longitudo Lunæ ecliptica ſecundùm tabulas eſt ♌ $6°. 43'. 8''$. Latitudo ejus borea $3°. 49'. 24''$.

In errorum Abaco die Dec. 18. Anni 1727, invenietur error computi — $3'. 1''$, quo Longitudo Lunæ ſupra inventa aucta, fiet ejus Longitudo correcta ad tempus datum ♌ $6°. 46'. 9''$.

| | | | | | | ° | ′ | ″ |
|---|---|---|---|---|---|---|---|---|
| Hinc centri Lunæ Aſcenſio recta | —— | —— | | | | 130 | 12 | 38 |
| quæ ſemidiametro ejus verâ ſecundùm Aſcenſ. rectam aucta | | | | | | | 17 | 18 |
| fiet limbi ejus ſequentis Aſcenſio recta | —— | —— | | ° | ′ | ″ | 130 | 29 | 56 |
| Solis Longitudini mediæ ad datum tempus | — | —— | 288 | 25 | 2 | | | |
| addatur arcus dato tempori medio $13^h. 28^m. 26^s$ proportionalis | —— | —— | — | 202 | 6 | 30 | | |
| horum ſumma eſt Meridiani Aſcenſio recta | | | —— | | | | 130 | 31 | 32 |
| Meridianus igitur limbum Lunæ ſequentem prætergreſſus eſt arcu | | | | | | | 0 | 1 | 36 |

qui

† Hæc tabula Periodos etiam Nodi complectitur, et utilis eſt ad Eclipſium revolutiones inveſtigandas.

qui tempore $6\frac{1}{2}$ a Meridiano percurritur, quæ a dato tempore ſubducta, tempus tranſitûs limbi Lunæ ſequentis darent, ſi Aſcenſio ejus recta cum quâ Meridianum tranſiit immutata manſiſſet; Luna verò eam $4''$ ferè minutis ſecundis interea auxerat, quibus arcus ſupra inventus auctus fiet $1'. 40''$, & limbi tranſitus ex tempore arcûs hujus deſcriptionis æſtimandus eſt. Meridianus arcum $1'. 40''$, tempore $7^s$ ferè, percurrit. Subducantur igitur $7^s$ a tempore dato & habebitur tempus medium tranſitûs Limbi Lunæ ſequentis $13^h. 28^m. 19^s.$ quem Rev. Dnus Bradleius ad $13^h. 28^m. 21^s.$ obſervabat.

## *De Longitudinum terreſtrium inveſtigatione ex obſervationibus Lunæ.*

Obſervationes huic operi maximè idoneæ, ſunt, Appulſus Lunæ ad Stellas fixas; vel, diſtantia ejus a fixâ quæ non longe diſtat à parallelo Latitudinis in quo Luna tum verſatur; vel denique, Lunæ a Sole diſtantia in primo vel ultimo menſis quadrante. Ex qualibet harum Obſervationum, datâ loci ubi illa facta fuerit Latitudine, Meridiani ignoti a Grenovicenſi diſtantia inveſtigari poteſt. Invento enim tempore quod Grenovici numerabatur cum Obſervatio facta fuit, ex temporum differentiâ dabitur Meridianorum diſtantia.

## EXEMPLUM.

Anno 1737. Jan. 1. $6^h. 4^m. 30^s$ temporis apparentis (quod in medium converſum fit $6^h. 13^m. 40^s$) ſub elevatione Poli borei $65°. 50'. 50''$, Luna ſtellam $\gamma$ Tauri occultabat. Quæritur Meridiani ubi obſervatio fiebat a Grenovicenſi diſtantia.

Dies hic in obſervationum Tabulis non invenitur; ſubductâ igitur à dato tempore Lunationum 111 Periodo, habebitur Jan. 11, Anni 1728; ad quem diem errorum Abacus $1'. 18''$ Longitudini tabularum addenda indicat.

Longitudo Stellæ tum temporis, fuit ſecundùm Catalogum Britannicum $\text{☊}\ 2°. 7'. 0''$, Latitudo ejus Auſtralis $5°. 46'. 22''$.

Pro tempore Grenovicenſi capiatur conjectura ex Ephemeridibus quibuſlibet Londinenſibus; hæ conjunctionem Lunæ cum ſtellâ ad horam circiter 5tam pomeridianam retulerunt. Longitudo Lunæ ad hoc tempus è tabulis eſt $\text{☊}\ 2°. 1'. 20''$, quæ additione $1'. 18''$ correcta, fit $\text{☊}\ 2°. 2'. 38''$. Latitudo ejus auſtralis $4°. 50'. 18''$.

| | ° | ′ | ″ |
|---|---|---|---|
| Parallaxis Lunæ horizontalis vera —— — — | 0 | 55 | 41 |
| Longitudini Solis mediæ ad idem tempus 292 11 24 | | | |
| addatur tempus obſervationis in Merid. ignoto $6^h. 13^m. 40^s$ 93 25 0 | | | |
| fit Meridiani ignoti Aſcenſio recta —— — — | 25 | 36 | 24 |
| Gradus Ecliptici nonageſimus ſub. elev. Poli $65° 50'. 50''$ | ♓ 24 | 56 | 24 |
| Angulus Lunæ parallacticus —— —— — | 5 | 33 | 2 |

| | ° | ′ | ″ |
|---|---|---|---|
| Vera Lunæ à vertice distantia | 55 | 12 | 54 |
| Augeatur ex conjecturâ Parallaxi altitudinis | + | 46 | |
| fiet Lunæ a vertice distantia apparens | 55 | 59 | 00 |
| Lunæ Semidiameter apparens | 0 | 15 | 28 |
| Parallaxis altitudinis vera | 0 | 46 | 10 |
| * Parallaxis Longitudinis, veræ Longitudini addenda | 0 | 4 | 28 |
| Parrallaxis Latitudinis, veræ Latitudini addenda | 0 | 45 | 57 |

Locus igitur Centri Lunæ apparens fuit ♊ 2°. 7′. 6″, cum Latitudine australi 5°. 36′. 15″.

Cum vero Lunæ Longitudo visa, Longitudinem Stellæ 6″ minutis secundis superet, Stellæ occultatio tempus ex Ephemeride assumptum præcessit.

Ad tempus corrigendum, convertatur Lunæ Semidiameter apparens 15′. 28″, ac etiam distantia apparens Centri ejus a Stellâ secundùm Latitudinem 10′. 7″, in minuta secunda, & differentia quadratorum harum quantitatum erit 492735″, cujus Radix quadrata 702″ = 11′. 42″, non multum aberrabit à Centri Lunæ distantiâ apparente a Stellâ, secundum Longitudinem tempore occultationis. augeatur hæc distantia 6″ illis minutis secundis, quibus Centri Lunæ longitudo visa Stellæ Longitudinem, secundum computum præcedentem, superabat; & è tabulis mediorum motuum Lunæ quæratur tempus quo Luna arcum 11′. 48″. percurrit, quod 21ᵐ. 30ˢ invenietur: quibus a tempore priori 5ʰ. subductis, instituatur computus ad tempus sic correctum 4ʰ. 38ᵐ. 30ˢ.

Ad hoc tempus Lunæ longitudo correcta est ♊ 1°. 51′. 13″, et latitudo ejus australis 4°. 49′. 59″.

| | ° | ′ | ″ |
|---|---|---|---|
| Meridiani ignoti Ascensio recta | 25 | 35 | 31 |
| Gradus Ecliptici nonagessimus | ♉ 24 | 55 | 57 |
| Angulus Lunæ Parallacticus | 5 | 24 | 32 |
| Parallaxis longitudinis, addenda | 0 | 4 | 21 |
| Parallaxis latitudinis, addenda | 0 | 45 | 57 |
| Stellæ à centro Lunæ distantia apparens secundùm Longitudinem | 0 | 11 | 26 |
| eorundum distantia apparens, secundùm Latitudinem | 0 | 10 | 26 |

Convertatur nunc Lunæ semidiameter apparens 15′. 28″, ac etiam differentia Latitudinum apparens 10′. 26, in minuta secunda. Differentia quadratorum harum quantitatum erit quadratum distantiæ apparentis Stellæ, in minutis secundis,

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* De Parallaxibus hæc sunt notanda.

Dum Luna in partibus cæli ad orientem gradûs Ecliptici nonagessimi versatur, Longitudo ejus apparens veram superat; dum vero partes occidentales occupat, Longitudo apparens a verâ deficit.

Simile obtinet in Ascensionibus rectis, prout Luna ad orientem vel ad occidentem Meridiani circuli per Loci verticem transeuntis, sita fuerit.

Quando angulus Lunæ parallacticus à circulo verticali cum circulo Latitudinis factus, major est recto versus Polum Ecliptici a quo Latitudo Lunæ nomen accipit, Latitudo visa veram superat, & è contra.

Cum angulus Lunæ parallacticus a circulo verticali cum circulo Declinationis factus, major est recto versus polum Æquatoris cui Luna propior est, Declinatio visa veram superat, & vice versa.

cundis, a circulo Latitudinis per centrum Lunæ tranſeuntis $11'.25''$; quæ in ratione cosinûs latitudinis Stellæ ad Radium aucta fiet $11'.28\frac{1}{4}''$ Stellæ diſtantia apparens a Lunæ centro ſecundùm Longitudinem, tempore occultationis. Hæc ſuperat diſtantiam ſupra inventam $2\frac{1}{4}''$, & tempus adhuc minuendum eſt.

Longitudo Lunæ apparens tempore ex Ephemeride aſſumpto (ſcil. $5^h$) fuit ♊ $2°.7'.6''$, illa verò tempore correcto ($4^h.38^m.30^s$) fuit ♊ $1°.55'.34''$, harum differentia $11'.32''$, eſt motus Lunæ viſibilis ſpatio temporis $21^m.30^s$. et

$$\text{Ut } 11'.32'' : 2\tfrac{1}{4}'' :: 21^m.30^s : 5^s —.$$

demptis igitur $5^s$ de $4^h.38^m.30^s$, habebitur $4^h.38^m.25^s$ tempus medium Grenovicenſe quando occultatio ſub Meridiano ignoto obſervabatur. Subducatur hoc tempus a dato obſervationis tempore medio $6^h.13^m.40^s$, reſiduum $1^h.35^m.15^s$, dabit Meridianorum diſtantiam $23°.48'.45''$.

Quoniam verò ſtellarum occultationes minùs frequenter navigantibus ſint obſervabiles, illorum uſui magis commoda videtur diſtantia Lunæ a Stellâ fixâ, cujus Latitudo non nimiùm diverſa fuerit ab illâ, quam tempore obſervationis habuerit Luna.

Meridianorum diſtantia quæſita intra tres vel quatuor gradus, ex diariis nauticis plerumque innoteſcit, et conjectura inde capi poteſt pro tempore quod Grenovici numerabatur cum obſervatio facta fuit: Ad quod tempus inveniantur è tabulis Longitudo & Latitudo Lunæ; & Longitudine ex errorum Abaco correctâ, inveniantur etiam Aſcenſio ejus recta & diſtantia a Polo; & inde angulus azimuthalis, cum verâ ejus a vertice diſtantiâ, quæ Parallaxi & Refractione corrigatur in viſam. Ad idem tempus inveniatur angulus Stellæ azimuthalis, & diſtantia ejus a vertice, quæ etiam refractione minuatur.

Hiſce inventis dabuntur in triangulo Sphærico duo latera, Lunæ ſcilicet & Stellæ a vertice diſtantiæ viſibiles, cum angulo azimuthali inter Lunæ centrum & Stellam, ab illis comprehenſo, ad latus tertium inveniendum; quod Lunæ ſemidiametro diminutum vel auctum, prout limbus ejus propior vel remotior obſervabatur, arcui obſervato æquale erit, ſi tempus Grenovicenſe rectè ſumebatur; ſin minùs, ad tempus ex conjecturâ correctum computus denuò inſtituendus eſt, & ex collatis erroribus ſatis tutò corrigetur tempus, & inde habebitur Meridianorum diſtantia.

## EXEMPLUM.

Anno 1725. Dec. 10. $11^h.14^m$ temporis apparentis, medii verò $11^h.13^m$, ad occidentem meridiani Grenovicenſis, ſub Poli borei elevatione gr. 40, ſtella $\gamma$ Leonis a limbo Lunæ propiore $20°.50'$ diſtare obſervabatur. Quæritur Meridiani ignoti à Grenovicenſi diſtantia.

Sumatur ex conjecturâ temporum differentia $2^h.8^m$, quæ tempori obſervationis addita, dabit $13^h.21^m$ pro tempore medio Grenovici numerato cum obſervatio facta fuit.

| | | ° | ′ | ″ | | ° | ′ | ″ |
|---|---|---|---|---|---|---|---|---|
| 1725. Dec. 10. $13^h. 21^m$ Longitudo Lunæ e tabulis | ♌ | 4 | 4 | 2 | | | | |
| Correctio ex errorum Abaco | | | + | 48 | | | | |
| Longitudo Lunæ vera | | | | | ♌ | 4 | 4 | 50 |
| Latitudo ejus borea | | | | | | 5 | 59 | 47 |
| Parallaxis Lunæ horizontalis vera | | | | | | 1 | 0 | 18 |
| Lunæ Aſcenſio recta | | | | | | 127 | 42 | 28 |
| ejus a Polo boreo diſtantia | | | | | | 65 | 52 | 43 |
| Meridiani ignoti Aſcenſio recta | | | | | | 78 | 46 | 8 |
| Angulus Azimuthalis Lunæ cum Meridiano circulo | | | | | | 84 | 0 | 10 |
| Diſtantia Lunæ a vertice | | 43 | 47 | 7 | | | | |
| Parallaxis altitudinis vera | | | + 42 | 16 | | | | |
| Refractio | | | − 0 | 53 | | | | |
| Lunæ à vertice diſtantia apparens | | | | | | 44 | 28 | 30 |
| Lunæ ſemidiameter apparens | | | | | | 0 | 16 | 47 |
| Longitudo ſtellæ $\gamma$ Leonis | | | | | ♌ | 25 | 45 | 00 |
| Latitudo ejus borea | | | | | | 8 | 47 | 27 |
| ejuſdem Aſcenſio recta | | | | | | 151 | 11 | 32 |
| Stellæ a Polo boreo diſtantia | | | | | | 68 | 47 | 21 |
| Angulus azimuthalis cum meridiano circulo | | | | | | 96 | 10 | 40 |
| vera Stellæ a vertice diſtantia | | 63 | 22 | 13 | | | | |
| Refractio | | | − 1 | 46 | | | | |
| Diſtantia Stellæ a vertice viſibilis | | | | | | 63 | 20 | 27 |
| Angulus Azimuthalis inter Stellam & Lunæ Centrum | | | | | | 12 | 10 | 30 |
| Centri Lunæ a Stellâ diſtantia viſibilis | | | | | | 21 | 13 | 13 |
| ſubducatur Lunæ ſemidiameter apparens | | | | | | 0 | 16 | 47 |
| habebitur Lunæ limbi propioris a Stella diſtantia viſibilis | | | | | | 20 | 56 | 26 |

hæc vero arcum obſervatum ſuperat $6'. 26''$, & tempus aſſumptum correctione indiget.

Tempori igitur addantur $15^m$ (Luna enim Stellam verſùs progreditur) & ad tempus medium Grenovicenſe $13^h. 36^m$ invenietur Longitudo Lunæ correcta ♌ 4°. 14. 10″. cum Latitudine boreâ 4°. 59′. 40″, & ex inventis iterum Lunæ & Stellæ diſtantiis a vertice viſibilibus cum angulo azimuthali comprehenſo, invenietur Limbi Lunæ a Stellâ diſtantia 20°. 47′. 17″ quæ 2′. 43″ ab obſervatâ deficit. Luna igitur temporis $15^m$ ſpatio, motu ſuo verſus Stellam arcum $9'. 9''$ percurrit; et,

Ut $9'. 9'' : 6'. 26'' :: 15^m : 10^m. 33^s.$

addantur igitur $10^m. 33^s$ tempori prius aſſumpto $13^h. 21^m$ & fiet $13^h. 31^m. 33^s.$ tempus Grenovicenſe quæſitum; eritque temporum differentia $2^h. 18^m. 33^s$ cui proportionalis eſt arcus 34°. 38′. 15″ Meridianorum diſtantia quæſita.

In hoc Exemplo diſtantia Lunæ a Stellâ viſibilis, ſine ambarum a vertice diſtantiis ſatis accuratè definiri non potuit, propter nimiam in altitudinibus tam diverſis refractionum differentiam. Ubi verò earum altitudines non valdè inæquales ſunt, * correctio

* Vid. Acta Philoſoph. No. 368. p. 169.

correctio propter Refractiones ſatis accuratè fiet, ſi arcus obſervatus, totidem minutis ſecundis quot in eo numerantur gradus, augeatur; & ex Parallaxium inveſtigatione computus nonnihil compendioſior reddetur.

## EXEMPLUM.

Anno 1725. Dec. 10. $12^h$. $50^m$ temporis medii ſub Meridiano ad occidentem Grenovicenſis, & Poli borei elevatione gr. 48, Stella $\beta$ Tauri à limbo Lunæ remotiore $47°. 57'. 12''$ diſtare obſervabatur. Quæritur Meridiani ignoti a Grenovicenſi diſtantia.

Augeatur arcus obſervatus propter refractiones $48''$, & fiet $47°. 58'$.

Sumantur pro temporum differentia $3^h. 44^m.$ & fiet tempus Grenovicenſe $16^h. 34^m.$

| | ° | ' | '' | | | |
|---|---|---|---|---|---|---|
| Ad hoc tempus Longitudo Lunæ ſecundùm tabb. eſt | ☊ | 6 | 4 | 0 | | |
| Correctio ex errorum Abaco | | + | 0 | 48 | | |
| | | | | | ° | ' '' |
| Longitudo Lunæ vera | | | | | ☊ 6 | 4 48 |
| Latitudo ejus borea | | | | | 4 | 58 6 |
| Parallaxis Lunæ horizontalis vera | | | | | 1 | 0 12 |
| Meridiani ignoti Aſcenſio recta | | | | | 103 | 9 3 |
| Gradus Ecliptici nonageſſimus | | | | | ♋ 9 | 40 0 |
| Lunæ Parallaxis Longitudinis, addenda | | | | | 0 | 24 38 |
| Parallaxis Latitudinis, demenda | | | | | 0 | 21 23 |
| Longitudo Lunæ apparens | | | | | ☊ 6 | 29 26 |
| Latitudo ejus borea apparens | | | | | 4 | 36 43 |
| Stellæ $\gamma$ Tauri Longitudo | | | | | ♊ 18 | 43 50 |
| ejuſdem Latitudo borea | | | | | 5 | 21 34 |

Dantur igitur in triangulo ſphærico duo latera, diſtantia ſcilicet Lunæ apparens a Polo Ecliptici boreo $85°. 23'. 17''$, & diſtantia Stellæ ab eodem $84°. 38'. 26''$. unà cum angulo ab illis comprehenſo, differentia ſcilicet Longitudinum $47°. 45'. 36''$, ad latus tertium inveniendum — — — — — 47 34 25

| | |
|---|---|
| quod auctum ſemidiametro Lunæ apparente — — — — — | 0 16 48 |
| fiet limbi Lunæ remotioris à Stellâ diſtantia apparens — — — | 47 51 13 |
| verum arcus ex obſervatione fuit — — — — — — — — | 47 58 0 |
| Differentia — — — — — — — — — | 0 6 47 |

Ex conjecturâ corrigatur tempus. addantur itaque $15^m$ tempori aſſumpto & fiet $16^h. 49^m.$ Longitudo Lunæ correcta ad hoc tempus invenietur ☊ $6°. 14'. 7''$, Latitudo ejus borea $4°. 57'. 58''$. & Parallaxibus iterum inventis, habebitur ex reſolutione trianguli ſphærici diſtantia centri Lunæ apparens à Stellâ $47°. 43'. 51''$, quæ ſemidiametro Lunæ aucta fiet $48°. 0'. 39''$. arcum ex obſervatione inventum $2'. 39''$ ſuperans. Et cum horis 16. $34^m$ diſtantia Lunæ à Stellâ ab obſervata deficiebat minutis $6'. 47''$, Luna à Stellâ digrediebatur $9'. 26''$, ſpatio temporis 15 minutorum; et

Ut $9'. 26'' : 6'. 47'' :: 15^m : 10^m. 42^s.$

addantur igitur $10^m$. $42^s$, tempori ad priorem computum assumpto, & habebitur $16^h$. $44^m$. $42^s$, tempus medium Grenovici numeratum cum observatio in Meridiano ignoto facta fuit. Et temporum differentiæ $3^h$. $54^m$. $42^s$, arcus $58°$. $40'$. $30''$ proportionalis est.

Eodem ferè modo ac in exemplis præcedentibus invenietur temporum differentia ex observatâ Lunæ a Sole distantiâ. Et cùm Sol latitudine careat eò magis simplex evadit calculus. Ratio tamen Semidiametri ejus habenda est, quæ arcui ex computo invento addenda vel demenda erit prout Limbus ejus remotior vel propior observabatur. Solis semidiameter invenietur ope tabulæ (O o 5) quæ diametros ejus exhibet Anomaliæ ejus mediæ respondentes.

## PRÆCEPTA CALCULI PLANETARUM QUINQUE.

### *Ad datum tempus, Planetæ superioris vel inferioris locum invenire.*

1. Inveniatur Longitudo Solis vera ad tempus datum. Et è Tabulâ *Log. distantiarum Solis a terra* (E e 4), capiatur logarithmus ad mediam Solis anomaliam respondens.

2. E Tabulis *Epocharum & mediorum motuum*, ad tempus datum colligantur, Planetæ, Aphelii ejus, & Nodi, Longitudines mediæ.

3. Aphelii Longitudo a Longitudine Planetæ mediâ subducta, dabit Anomaliam ejus mediam & in tabulâ Æquationum Planetæ, inveniatur Æquatio Elliptica huic respondens, quæ subducta à Longitudine mediâ vel eidem addita, secundùm tabulæ indicem, dabit Planetæ Longitudinem heliocentricam in orbitâ propriâ.

4. A Longitudine Planetæ heliocentricâ, subducatur Longitudo Nodi, residuum, Argumentum Latitudinis appellatur; cujus ope in tabulâ *Latitudinariâ Planetæ* inveniantur Orbitæ ejus Inclinatio, Reductio, & Logarithmus curtationis. Reductio a Planetæ longitudine heliocentricâ subducta, vel eidem addita secundùm tabulæ indicem, dat veram ejus Longitudinem heliocentricam in Eclipticâ.

5. E Tabulâ *logarithmorum distantiarum Planetæ a Sole*, capiatur Logarithmus Anomaliæ Planetæ mediæ respondens, qui Logarithmo curtationis diminutus, fiet logarithmus distantiæ Planetæ à Sole curtatæ.

6. Planetæ superioris Longitudo heliocentrica a Longitudine Solis, vel Solis Longitudo ab inferioris Planetæ Longitudine subducta, angulus Commutationis appellatur.

7. Differentiæ Logarithmorum distantiæ Solis a Terra, & distantiæ Planetæ a Sole, addatur anguli gr. 45 tangens logarithmica, erit summa tangens logarithmica anguli gradus 45 superantis.

Tangenti logarithmicæ excessus auguli hujus supra gr. 45, addatur tangens logarithmica dimidii anguli Commutationis, horum summa erit tangens anguli quo auctus dimidius commutationis angulus Planetæ superioris, vel diminutus si

Planetæ

Planeta unus ex inferioribus ſit, fiet Angulus qui Elongationis appellatur. Si vero Commutationis angulus dimidius tria ſigna ſuperet, augendum vel minuendum erit ejus ad ſex ſigna complementum angulo invento, ut habeatur Elongatio.

8. Si Comutationis angulus ſex ſignis minor ſit, Elongatio Planetæ ſuperioris a Solis longitudine ſubducta, illa verò Planetæ inferioris eidem addita, veram Planetæ Longitudinem geocentricam dabit. Si vero angulus ille ſex ſigna ſuperet contrarium in utriſque faciendum eſt.

9. Tangens inclinationis Orbitæ Planetæ, eſt ad tangentem Latitudinis ejuſdem geocentricæ, in ratione ſinus anguli Commutationis ad ſinum anguli Elongationis.

## EXEMPLUM I.

*Quæritur locus Planetæ Veneris geocentricus An.* 1690. *Jun.* 13. $1^{h}. 17\frac{1}{2}^{m}$ *temporis medii.*

| | ☉ Anom. med. | ☉ Apog. | ♀ Long. med. | ♀ Apog. | ♀ Nodus. | Inclin Bor. |
|---|---|---|---|---|---|---|
| | s ° ′ ″ | s ° ′ ″ | s ° ′ ″ | s ° ′ ″ | s ° ′ ″ | ° ′ ″ |
| 1690. | 6 12 55 43 | 3 7 28 3 | 7 22 26 18 | 10 6 22 5 | 2 13 52 43 | 0 ′ ″ |
| Jun. 13. | 5 11 38 19 | 0 27 | 8 22 45 20 | 25 | 14 | 2 58 42 |
| hor. 1 | 2 28 | | 4 0 | | | |
| min. 17 | 42 | 3 7 28 30 | 1 8 | 10 6 22 30 | 2 13 52 57 | |
| sec. 30 | 1 | | 2 | 6 8 54 18 | 2 1 31 20 | |
| | | | | ♀ Med. Anom. | Arg. Latit. | |
| ☉ M. Anom. | 11 24 37 13 | | 4 15 16 48 | | | |
| Apog. | 3 7 28 30 | Proſtaph. | + 7 29 | Log. diſt. terræ à Sole | | 5.007256 |
| | | | | Log. diſt. ♀ a Sole | | 4.855745 |
| | 3 2 5 43 | | 4 15 24 17 | | | |
| Proſtaph. | + 10 41 | Reductio | — 2 31 | Tang. 54 47 51 | | 10.151511 |
| | | | | —45 0 0 | | |
| ☉ Long. | 3 2 16 24 | ♀ Helico. | 4 15 21 46 | | | |
| ♀ Elongat. | + 17 38 40 | ☉ Subtr. | 3 2 16 24 | Tang. 9 47 51 | | 9.237255 |
| | | | | Tang. 21 32 41 | | 9.596391 |
| ♀ Long. Geoc. | 3 19 55 4 | Commut. | 1 13 5 22 | Tang. 3 54 1 | | 8.833646 |
| ♀ Lat. Bor. | 1 19 21 | dimidium | 21° 32 41 | | | |
| | | | | 17 38 40 | ♀ Elongatio. | |

| | | | |
|---|---|---|---|
| Commut. | 43 5 22 | C. Ar | 0.16549 |
| Elong. | 17 38 40 | Sin. | 9.48160 |
| Inclin. | 2 58 42 | tan. | 8.71624 |
| ♀ Lat. | 1 19 21 | tan. | 8.36333 |

# EXEMPLUM. II.

*Quæritur locus Planetæ Jovis Geocentricus An.* 1690. *Dec.* 3. $6^{h}.\ 30^{m}$ *temporis medii.*

| | ☉ Anom. med. | ☉ Apog. | ♃ Long. med. | ♃ Apog. | ♃ Nodus. | Inclin. Auſtr. |
|---|---|---|---|---|---|---|
| 1690. | 6 12 55 43 | 3 7 28 3 | 11 13 7 16 | 6 9 21 48 | 3 7 25 50 | ° ′ ″ |
| Dec. 3 | 11 2 8 51 | 0 56 | 28 0 58 | 1 6 | 46 | 1 18 58 |
| hor. 6 | 14 47 | | 1 15 | | | |
| min. 30 | 1 14 | | 6 | 6 9 22 54 | 3 7 26 36 | |
| | | 3 7 28 59 | | 6 1 46 41 | 9 3 53 56 | |
| ☉ An. med. | 5 15 20 35 | | 0 11 9 35 | ♃ An. med. | Arg. Latit. | |
| ☉ Apog. + | 3 7 28 59 | ♃ Proſtaph. | + 10 57 | | | |
| | 8 22 49 34 | | 0 11 20 32 | Log. diſt. ♃ à Sole | | 5.694521 |
| Proſtaph. | — 30 2 | Reductio | + 0 4 | Log. diſt. ⊖ à Sole | | 4.992841 |
| ☉ Long. | 8 22 19 32 | ♃ Long. Heli. | 0 11 20 36 | Tang. 78 45 31 | | 10.701680 |
| ♃ Elong. + | 3 7 39 26 | à ☉ | 8 22 19 32 | — 45 | | |
| ♃ Long. Geoc. | 11 29 58 58 | Commutatio | 8 10 58 56 | 33 45 31 | | tang. 9.825034 |
| Lat. Auſtr. | 1 22 47 | ſemiſ. | 4 5 29 28 | 54 30 32 | | tang. 10.146874 |
| | | ſemiſſis compl. | 54 30 32 | 43 8 54 | | tang. 9.971908 |
| | | | | 97 39 26 | ♃ Elongatio. | |
| | | | | Commut. 70 58 56 | | Co. Ar 0.02437 |
| | | | | Elong. 97 39 26 | | ſin. 9.99611 |
| | | | | Inclin. 1 18 58 | | tan. 8.36125 |
| | | | | Latitud. ♃ 1 22 47 | | 8.38173 |

## PRÆCEPTA CALCULI SATELLITUM JOVIS.

### *Diſtantias apparentes Satellitum a Jovis Centro è terra viſas, ad datum tempus invenire.*

1. Inveniatur Longitudo Solis vera, unà cum Longitudinibus Planetæ heliocentricâ & geocentricâ, ad tempus datum.

2. E Tabulis *Epocharum & mediorum motuum* (A a a a 3 & ſeqq) colligantur Satellitum motus medii ad tempus datum, unà cum loco Apſidis Satellitis quarti, qui ab ejus Longitudine mediâ ſubductus, dabit hujus Satellitis Anomaliam mediam. In tabulâ *Æquationum Veneris* (U u 2) (cujus orbitæ illa Satellitis quarti ferè ſimilis deprehenditur) ad hanc mediam Anomaliam inveniatur æquatio, quâ diminuta vel aucta Longitudo media quarti Satellitis, fiet ejus Longitudo vera. Cæterorum trium motus medii Æquatione non indigent.

3. De locis Satellitum ſingulis ſubducatur Jovis Locus geocentricus, & in tabulâ *Diſtantiarum apparentium Satellitum a Centro Jovis, in Planetæ ſemidiametris & ſemidiametri centiſſimis* (G g g g). inveniantur ſingulorum diſtantiæ apparentes a Centro Jovis, ad hæc reſidua reſpondentes. Et cum hoc reſiduum minus ſex ſignis fuerit, Satelles ad Planetæ partes orientales conſpicietur, ſi vero ſex ſigna ſuperaverit, ad occidentales; ut in indice tabulæ notatur.

Hæ quidem Satellitum diſtantiæ apparentes a centro Jovis, Correctione non egebunt ſi Jupitur in Perihelio ſuo & etiam in oppoſitione ad Solem fuerit. Ad minimam

minimam ſcilicet Jovis à Terrâ diſtantiam tabulæ conſtructæ ſunt. In majoribus verò Planetæ à Terrâ diſtantiis, ſatellites, propter motum luminis progreſſivum, locos è tabulis inventos ſeriùs occupare videbuntur. Corrigendum eſt igitur tempus datum ope tabularum *Æquationum luminis* (F f f f 4).

4. A Solis Longitudine ſubducatur Longitudo Jovis heliocentrica, & in tabulâ *Æquationum luminis*, inveniatur Æquatio huic reſiduo reſpondens; quæ augenda eſt è tabulâ *Correctionum Æquationum luminis* ad Jovis locum heliocentricum; & tempus datum hâc Æquatione auctum, erit illud ipſum, quo ſatellites locos in tabulis inventos occupare videbuntur.

5. Ut igitur habeantur poſitiones Satellitum ad ipſum tempus datum, æquatio luminis ab illo auferenda eſt, & computus ad tempus ſic correctum inſtituendus.

## EXEMPLUM.

### *Quæruntur diſtantiæ Satellitum à Centro Jovis, & eorum poſitiones meridie æquato Nov. 8. Anno 1719.*

| | M. Med. 1mi. | M M. 2di. | M M. 3tii. | M M. 4ti. | Apſ. 4ti. | | |
|---|---|---|---|---|---|---|---|
| | s o ′ ″ | s o ′ ″ | s o ′ ″ | s o ′ ″ | s o ′ | | s o ′ ″ |
| 1719. | 8 2 18 20 | 3 18 14 0 | 10 10 51 58 | 0 26 38 4 | 11 9 12 | ☉ | 7 26 37 23 |
| Nov. 8. | 4 8 33 43 | 10 8 56 9 | 7 9 5 57 | 8 10 11 12 | 31 | | |
| | 0 10 52 3 | 1. 27 10 9 | 5 19 57 55 | 9. 6 49 16 | 11 9 43 | ♄ H | 5 21 26 56 |
| ♄ Geoc. | 6 0 8 11 | 6 0 8 11 | 6 0 8 11 | + 42 33 | 9 27 6 | ♄ G | 6 0 8 11 |
| | 6 10 43 52 | 7 27 1 58 | 11 19 49 44 | 9 7 31 49 | | | s o ′ |
| | | | | 6 0 8 11 | | ☉ à ♄ | 2 5 11 |
| | | | | | | | m s |
| | | | | 3 7 23 38 | | Æq. Lum. | 10 28 |
| | | | | | | Correctio | 3 25 |
| | 1,1 Occ. | 7,89 Occ. | 2,64 Occ. | 26,17 Ori. | | | 13 53 |

Hæ ſunt Satellitum à Centro Jovis diſtantiæ & poſitiones $13^{m}.\ 53^{s}$ poſt meridiem diei Nov. 8vi æquatum. Pro illorum verò locis ad ipſum tempus datum computus inſtitui debet ad $23^{h}.\ 46^{m}.\ 7^{s}$ diei præcedentis. Cum autem Satellitibus dignoſcendis præcipuè inſerviat hæc computatio, ad quod parvi ſit plerumque momenti quadrantis horæ differentia, Æquationes luminis hic negligi poſſunt.

### *Tempus Eclipſis Satellitis Jovis cujuſcunque, quæ proximè poſt datum tempus eſt futura, invenire.*

1. Ad datum tempus inveniantur Solis Longitudo vera, & Longitudines Jovis heliocentrica & geocentrica.

2. Ex *Epocharum & mediorum motuum* tabulis colligantur Satellitis motus medii ad tempus datum. Et, ſi Quarti Satellitis Eclipſis quæratur, corrigenda eſt Longitudo ejus media Æquatione Centri Veneris, ut ſupra monſtratum eſt.

3. A Longitudine Jovis heliocentricâ in Orbitâ propriâ ſubducatur Longitudo Nodi Satellitis (qui Anno 1717 fuit ♎ 11°. 30′), & in tabulâ *Latitudinariâ Satellitum Jovis* (Gggg2) inveniatur Reductio huic argumento reſpondens, quâ Longitudo Jovis aucta vel diminuta, ſecundùm tabulæ indicem, ad Satellitis Orbitam reducetur.

4. A Jovis Longitudine ſic reductâ ſubducatur longitudo Satellitis media, & in tabulâ *Temporis mediis Satellitum motibus &c.* (Eeee & ſeq) huic reſiduo reſpondens inveniatur æquatio, quâ ſi augeatur tempus datum, habebitur mediæ Eclipſis tempus medium. Quod ſi non magis unius diei ſpatio à dato tempore diſtet, correctione non indigebit; ſi verò magis diſtiterit, calculus ad horam unam aut alteram ante tempus mediæ Eclipſis ſupra inventum, denuò inſtituendus eſt.

5. Tempus mediæ Eclipſis ſic inventum, Æquatione luminis augendum eſt.

6. In tabulis *Semidurationum Eclipſium Satellitum Jovis*, (Ffff 2 & ſeq), ad Jovis à Nodo diſtantiam, inveniatur Eclipſis ſemiduratio, quæ à tempore mediæ Eclipſis ſubducta, Satellitis in Jovis umbram immerſionem dabit, & ad idem addita, ejuſdem ex umbrâ emerſionem.

## EXEMPLUM.

*Quæritur tempus medium Eclipſis primi Jovis Satellitis proximè futuræ poſt meridiem Diei Nov. 8vi. æquatum, Anno* 1719.

| | s | o | ′ | ″ |
|---|---|---|---|---|
| Longitudo Solis vera tunc temporis fuit | 7 | 26 | 37 | 23 |
| Longitudo Jovis heliocentrica in Orbitâ propriâ | 5 | 21 | 25 | 56 |
| Nodi Satellitis Longitudo, ſubtrahenda | 10 | 11 | 30 | 0 |
| Argumentum Latitudinis | 7 | 9 | 55 | 56 |
| Reductio, à Longitudine Jovis ſubtrahenda | | | −1 | 59 |
| Jovis locus ad Orbitam Satellitis reductus | 5 | 21 | 23 | 57 |
| Subtrahatur inde Satellitis Longitudo | 0 | 10 | 52 | 3 |
| reſiduum erit, diſtantia Satellitis à Conjunctione quæſitâ | 5 | 10 | 31 | 54 |
| | h | m | s | |
| Huic arcui, in tabulâ *Temporis medio* &c. reſpondent | 18 | 56 | 29 | |
| addatur Æquatio Luminis correcta | + | 13 | 53 | |
| Summa erit tempus medium Conjunctionis apparentis Nov. 8 | 19 | 10 | 22 | |
| Semiduratio Eclipſis | + | 1 | 6 | 41 |
| Immerſio | 18 | 3 | 41 | |
| Emerſio | 20 | 17 | 3 | |

Notandum eſt, quod à tempore conjunctionis Jovis cum Sole ad ejuſdem ad Solem oppoſitionem, Satellitis primi immerſiones ſolæ ſunt viſibiles; ab oppoſitione verò ad Conjunctionem, emerſiones ejus ſolummodo videri poſſunt.

Idem

Idem ferè obtinet in Satellite ſecundo; ubi verò Jovis locus heliocentricus eſt circa medium Tauri, vel Scorpii, & Jupiter eodem tempore in quadraturis ad Solem, hujus tam immerſiones quam emerſiones ſunt quandoque viſibiles.

Si Solis à loco Jovis heliocentrico diſtantia major fuerit angulo gr. 45, tertii Satellitis & Immerſiones & Emerſiones ſunt viſibiles.

Ambo hæc Phænomena in quarto Satellite videre licet, ubi diſtantia Solis à loco Jovis heliocentrico angulum gr. 24 ſuperat.

Sicubi verò Jovis diſtantia à Satellitum Nodo alterutro angulum gr. 52 ſuperat, Satelles quartus eclipſin non patietur.

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# Errata in Præceptis.

P. (a) 2, l. 9, *poſt* tera, *dele comma.* l. 34, *pro* aquatio, *lege* æquatio. l. 37, *poſt* addendæ, *pone comma.* p. (a) 3, l. 10, *poſt* ☉ Pro, *dele punctum.* l. 16, pro *Solis & Lunæ*, lege *Lunæ cum Sole.* l. 17, *pro* ſeq.), *lege* ſeqq.). ibid. *pro* Tabulis, *lege* tabulâ. *ibid. &* 18 *pro* (* E c 4) *lege* (* * E c). l. 17, *poſt* ſubducta *pone comma, & etiam poſt* tabulæ. p. (a) 4, l. 22, *pro* Anom. med. *lege* ☉ Anom. med. p. (b) l. 8, poſt *gradus*, adde *& ad minuta.* l. 21, *poſt* invento, *adde* in conjunctionibus, vel ab ejus oppoſito in oppoſitionibus. *In Exemplo, pro* Proſtaph. *lege* Proſthaph. *et in exemplis ſequentibus, ferè omnibus, ubi mendosè legitur* Proſtaph. *pro* Proſthaph. *In ejuſdem exempli numeris ad dextram, pro* 0. 5. 20. 38, *lege* 0. 4. 20. 38. p. (b) 2, l. 4, *pro* min. 42. ſec. 26, *lege* min. 40. ſec. 16. l. 6, *pro* ſubducenda; addatur, *lege* addenda; ſubducatur. l. 7, *pro* $45^{m}. 24^{s}$, *lege* $35^{m}. 18^{s}$. l. 35, *pro* (* * E c) *lege* (* * E c 3). p. (b) 4, l. *antepen. dele* ☉ ° '.

P. (c) *poſt* logarithmus, *pone comma.* l. 34, *poſt* dium *pone comma.* l. 38, *pro* diſtaverit *lege* diſtans erit. l. 29, *poſt* Radium, *pone comma.* p. (c) 3, l. 21, *pro* 33. 19. 34, *lege* 33. 19. 54. p. (c) 4, l. 4, *pro* exactum, *lege* exactam. l. 6, *pro* invenietur, *lege* inveniatur. *ibid. pro* culibet, *lege* cuilibet. l. 24, *pro* Perodio *lege* Periodo. p. (d) l. 3, *pro* manſiſſit, *lege* manſiſſet. p. (d) 2, l. 7, *pro* Parrallaxis *lege* Parallaxis. l. 30, *pro* eorundum, *lege* eorundem. p. (d) 3, l. 1, *pro* tranſeuntis, *lege* tranſeunte. p. (e) l. 23, *pro γ, lege β.* l. *antepen. pro* ab obſervata, *lege* ex computo inventa, ab obſervatâ diſtantiâ.

P. (e) 2, l. 20, *poſt* mediam, *pone ſemicolon.* l. 37, *poſt* Sole, *adde* curtatæ. l. *antepen. lege* exceſſûs. p. (e) 3, l. 15, *pro* ♀ Apog. *lege* ♀ Aphel. *In exemplo medio, pro* ♀ Helico. *lege* ♀ Helioc. p. (e) 4, l. 4, *pro* ♅ Apog. *lege* ♅ Aphel. l. *ult. pro* Jupitur, *lege* Jupiter. In Indice, p. 1, l. 35, lege *Æquinoctio.* p. 2, l. 10, lege *Æquinoctio.*

## PRECEPTS FOR COMPUTING THE PLACES OF JUPITER's SATELLITES.

### *To find the apparent Diſtances of the Satellites from the Center of* Jupiter, *as ſeen from the Earth at a given time.*

1. Find the Sun's true Longitude, and the heliocentric and geocentric Longitudes of *Jupiter*, to the given time.

2. From the Table *Epochæ mediorum motuum Satellitum Jovis* (A a a a 3 and the following) and the Tables entitled *Medii motus &c.* for months, days, and parts of a day, collect the mean Motions to the given time; and likewiſe the mean Motion of the Apſis of the fourth Satellite, which, ſubtracted from the mean Longitude of that Satellite, will give its Mean Anomaly. In *Tabula Æquationum Veneris* (U u 2) ſeek the Equation anſwering to this Mean Anomaly; and add it to, or ſubtract it from the Mean Longitude of the fourth Satellite (as the Table ſhall direct), it will give the true Longitude thereof. The Mean Places of the other three Satellites require no Equation of the Center.

3. From the Place of each Satellite ſubtract the geocentric Longitude of *Jupiter*, and in the Table *Diſtantiæ apparentes Satellitum à centro Jovis &c.* (G g g g) find the numbers anſwering to the diſtance of each from the geocentric place of that Planet, which are apparent diſtances of each from the Center of *Jupiter* in Semidiameters and hundredth parts of a Semidiameter of that Planet. And when the Argument of this Table is leſs than ſix Signs, the Satellite will be ſeen to the Eaſt of *Jupiter*, when greater, to the Weſt; as is expreſſed at the top and bottom of the Table.

Theſe apparent diſtances of the Satellites from the Center of *Jupiter*, need no correction when that Planet is in its Perihelion, and at the ſame time in oppoſition to the Sun; for the Tables are conſtructed to the neareſt diſtance of *Jupiter* from the Earth: But at all other times the Satellites will appear to come later to the places found from the Tables, than the time to which they were computed, on account of the progreſſive motion of Light. The given time therefore muſt be corrected by means of the Tables *Æquationes Luminis addendæ*, and *Æquationum Luminis Correctiones* (F f f f 4).

4. From the Sun's Longitude, ſubtract the heliocentric Longitude of *Jupiter*, and in the Table *Æquationes Luminis* find the Equation anſwering to this Remainder, to which add the Equation from the Table *Æquationum Luminis Correctiones* found by the heliocentric Longitude of *Jupiter*; their Sum, added to the Time for which the computation was made, will give the true time when the Satellites ſhall appear in the Places before found.

5. Therefore to obtain the Situations of the Satellites to a given time, ſubtract the Equations of Light from the time given, and compute to the time ſo corrected.

## EXAMPLE.

*Required, the apparent Distances of the Satellites from the Center of* Jupiter, *and their Situations on the mean Noon of* Nov. 8, 1719.

| | M. Mot. 1 Sat. | M. M. 2d Sat. | M. Mot. 3d Sat. | M. M. 4th Sat. | Apſ. 4th | | |
|---|---|---|---|---|---|---|---|
| | ° ′ ″ | ° ′ ″ | ° ′ ″ | ° ′ ″ | ° ′ | | ° ′ ″ |
| 1719 | 8 2 18 20 | 3 18 14 0 | 10 10 51 58 | 0 26 38 4 | 11 9 12 | ☉ | 7 26 37 23 |
| Nov. 8 | 4 8 33 43 | 10 8 56 9 | 7 9 5 57 | 8 10 11 12 | 31 | ♃ H | 5 21 26 56 |
| | 0 10 52 3 | 1 27 10 9 | 5 19 57 55 | 9 6 49 16 | 11 9 43 | ♃ G | 6 0 8 11 |
| ♃ Geoc. | 6 0 8 11 | 6 0 8 11 | 6 0 8 11 | + 42 33 | 9 27 6 | | |
| | | | | | ☉ fr. ♃ H | 2 | 5 11 |
| | 6 10 43 52 | 7 27 1 58 | 11 19 49 44 | 9 7 31 49 | | | |
| | | | | 6 0 8 11 | | | |
| | | | | | | | m s |
| | | | | 3 7 23 38 | Eq. of Light | | 10 28 |
| | | | | | Correction | | 3 25 |
| | 1, 1 Weſt | 7, 89 Weſt | 2, 64 Weſt | 26, 17 Eaſt. | | | 13 53 |

Theſe are the apparent diſtances of the Satellites from the Center of *Jupiter* and their Situations $13^m. 53^s$ after the mean Noon of *Nov.* 8. Therefore to obtain them to the given time, the computation ſhould be made to $13^m. 53^s$ before the mean Noon, that is to $23^h. 46^m. 7^s$ mean time of the preceding day. But as the chief end of this calculation is to diſtinguiſh the Satellites one from another, for which purpoſe the difference of a quarter of an hour is commonly of ſmall importance, the Equations of Light may here be neglected.

### *To find the time of the Eclipſe of any one of* Jupiter's *Satellites, which ſhall happen next after a given Time.*

1. Find the Sun's true Longitude, and the heliocentric and geocentric Longitudes of *Jupiter* to the given Time.

2. From the Table *Epochæ mediorum motuum* (A a a a 3) and the Tables for Months and Hours &c. collect the mean Place of the Satellite for the given time. And if an Eclipſe of the fourth Satellite is ſought, correct its mean Longitude by the Equation of the Center as above directed.

3. From the heliocentric place of *Jupiter* in his Orbit, ſubtract the Place of the Nodes of the Satellites (which, in the year 1717, was found to be ♋ 11°. 30′) the remainder will be the Argument of Latitude; and in *Tabula Latitudinaria Satellitum Jovis* (G g g g 2) find the Reduction anſwering to this Argument, which, added to, or ſubtracted from the heliocentric place of *Jupiter*, according as the Table ſhall direct, will reduce the ſame to the Orbit of the Satellite.

4. From the Place of *Jupiter* reduced to the Orbit of the Satellite, ſubtract the mean Place of the Satellite, and in *Tabula temporis medio primi Satellitis a Jove motui congruentis* (E e e e 4) (if the Eclipſe of the firſt Satellite be required) or, in *Tabula temporis mediis Satellitum ſecundi, tertii & quarti motibus a Jove congruentis* (F f f f) (if the Eclipſe of one of the other three be ſought) find the time anſwering to this remainder, which, added to the time given, will give the mean time of the Middle of the Eclipſe, which, if it happen within a day of the given time, may be taken as correct; but if it exceed a day, the computation muſt be made over again to an hour or two before the time ſo found.

5. To the time of the Middle of the Eclipſe found as above, add the Equations of Light.

6. In the Tables *Semidurationes Eclipſium Satellitum Jovis* (F f f f 2 &c.) find the Semiduration of the Eclipſe of the Satellite, anſwering to the diſtance of *Jupiter* from the Node, which, ſubtracted from the time of the Middle of the Eclipſe, will give the Immerſion of the Satellite into the Shadow of *Jupiter*, and added to the ſame will give its Emerſion out of the Shadow.

## EXAMPLE.

*Required the mean time of the Eclipſe of the firſt Satellite of* Jupiter *which ſhall happen next after the mean Noon of* Nov. 8. 1719.

| | s | ° | ′ | ″ |
|---|---|---|---|---|
| The Sun's true Longitude at the given time - - - - - - - | 7 | 26 | 37 | 23 |
| The heliocentric Place of *Jupiter* in his Orbit - - - - - - - | 5 | 21 | 25 | 56 |
| The Place of the Node of the Satellites, ſubtract - - - - - - | 10 | 11 | 30 | 0 |
| The Argument of Latitude - - - - - - - - - - - - - | 7 | 9 | 55 | 56 |
| The Reduction to be ſubtracted from the Place of *Jupiter* - - - | | | −1 | 59 |
| The Place of *Jupiter* reduced to the Orbit of the Satellite - - - | 5 | 21 | 23 | 57 |
| from which ſubtract the Place of the Satellite - - - - - | 0 | 10 | 52 | 3 |
| there remains the diſtance of the point of Conjunction from the Satellite | 5 | 10 | 31 | 54 |

| | h | m | s |
|---|---|---|---|
| The time anſwering to this Arc in *Tabula temporis medio &c.* is - - | 18 | 56 | 29 |
| Add the Equation of Light with its correction - - - - - - | + | 13 | 53 |
| Their Sum will be the mean time of apparent Conjunction *Nov.* 8 - | 19 | 10 | 22 |
| Subtract and add the Semiduration of the Eclipſe - - - - - - | ∓1 | 6 | 41 |
| Immerſion | 18 | 3 | 41 |
| Emerſion | 20 | 17 | 3 |

It is to be obſerved, that the Emerſions of the firſt Satellite are not viſible from the time of the Conjunction of *Jupiter* with the Sun to the time of his Oppoſition; neither are the Immerſions thereof viſible from the time of *Jupiter*'s Oppoſition to the Sun to the time of his Conjunction.

The like holds with regard to the ſecond Satellite, except that when *Jupiter*'s heliocentric Place is near the Middle of *Taurus* or of *Scorpio* both the Immerſions and Emerſions are ſometimes to be ſeen.

When the Sun's diſtance from the heliocentric Place of *Jupiter* exceeds an Angle of 45 degrees, both the Immerſions and Emerſions of the third Satellite are viſible.

In the fourth Satellite both theſe phænomena are viſible when the Sun's diſtance from the heliocentric Place of *Jupiter* exceeds an Angle of 24 degrees. But when *Jupiter* is not within the diſtance of 52 degrees of either of the Nodes, there can be no Eclipſe of this Satellite.

## REMARK.

THE curious lover of Aſtronomy, has therefore in theſe ſeries of oppoſitions of the Sun and ſuperior Planets, as it were a ſynopſis of their motions for ſixty ſucceſſive years, according to the order of time in which they were ſeen in the Heavens, compiled with no leſs ſtrictneſs than diligence, from the moſt accurate Obſervations we could procure. You ſee alſo our Tables are made to undergo an examination rigid enough: And yet be not ſurprized that in *Jupiter* the error ſometimes ariſes to eight minutes, and ſometimes in *Saturn* to ten: For indeed it cannot be otherwiſe without aſſuming new hypotheſes not yet ſufficiently known and proved by the Touch-ſtone of the Heavens. *Jupiter* indeed in his motion from the oppoſition in the year 1677 to that of the year 1689, according to undoubted Obſervations, was found ſlower by twelve whole minutes than he was in the preceding or ſubſequent Revolution. Alſo *Saturn*'s Period, between the years 1668 and 1698, was ſhorter than his mean Revolution by almoſt a whole week; and another Period of his compleated between the years 1689 and 1719, was longer than the mean Revolution by about as many days; ſo that their difference in duration was above thirteen days. But whether this will be ſo for the time to come muſt be left to the Obſervation of Poſterity.

It is more than probable that this is owing to the mutual actions of the greater Planets upon one another, diſturbing the centripetal forces of the Sun: For what happened in the year 1683 ſeemed no ſlight argument to prove this; for then there was a conjunction of *Jupiter* and *Saturn* in thoſe parts of their Orbits, where, on account of the ſituation of the Apſes, the Planets approached very near to each other; their joint forces then urged *Saturn* towards the Sun, and on the contrary *Jupiter* from the Sun; wherefore *Jupiter*, having his proper velocity increaſed, and the centripetal force of the Sun being decreaſed, muſt have run out into a greater Orbit, and would require a longer time for a Revolution: While *Saturn*, at the ſame time, having his proper velocity diminiſhed, and being urged with a greater force towards the Sun, muſt have been forced into a leſs Orbit, and ſo revolve in a leſs time. If the ſame happen again and again, when *Jupiter* and *Saturn* are in conjunction in *Leo*, we may juſtly hope that the errors we find in their motions, as they are owing only to the joint efficacy of three Centers, at length may be removed by the *Newtonian Geometry*. But if not, or if the Periods ſhould prove longer where they are now the ſhorteſt, or the contrary, there muſt be ſome extrinſic cauſe, of which we are now ignorant. But more of this elſewhere.

## *The Reverend Mr.* James Bradley's *Obſervations on his Tables of* Jupiter's *Satellites.*

IN theſe Tables we have determined the mean Motions of the Satellites, by comparing ſuch of the oldeſt Obſervations we could procure, as ſeemed to be the moſt accurate, with our own lately taken at Wanſted; when *Jupiter*, after four Revolutions, was nearly in the ſame place in his Orbit. But comparing in like manner the Obſervations at the diſtances of one, two, and three Revolutions of *Jupiter*, we have ſometimes found very remarkable differences in the motions of the three inferior Satellites, eſpecially in that of the ſecond, or next but one to *Jupiter*.

It is not yet certain, whether theſe inequalities do not in part ariſe from the Excentricities of their Orbits, and the motion of their Apſides; but by what we can collect from the motions of the ſecond Satellite, it is probable they may be occaſioned by the mutual action of the Satellites on each other: For ſometimes the motion of this Satellite does in ſo ſhort a time vary ſo conſiderably from its mean, that a ſmall Excentricity will not account for it; while on the other hand, the reſt of the Obſervations will not allow a great one. As far as we can hitherto find, the Period of theſe Errors nearly anſwers to the time the three inferior Satellites take in returning to the ſame ſituation with reſpect to each other and to the Axis of the Shadow of *Jupiter*, which is 437 days, or after 123 Revolutions of the ſecond Satellite. After this Period, the like Errors return, nearly in the ſame order: But in the intermediate time, that is, after 60 Revolutions, this Satellite will deviate $10^m$, $20^m$, $30^m$, and even ſometimes 40 minutes of time from its rate of motion during the ſeven preceding, or the ſeven following months. Now becauſe the Satellites are not found in the ſame place in the heavens after the aforeſaid Period is compleated, it is poſſible theſe Errors may vary ſomewhat on that account. And if the Orbit of this Satellite be likewiſe excentric, as the late Obſervations ſeem to make it, the inequalities ariſing from both cauſes muſt be very intricate, and not eaſily to be ſeparated by Obſervation alone.

The Errors of the firſt and third Satellite are not ſo great, but ſeem to ariſe from the ſame cauſes; for they do not depend wholly on the Excentricity. We have alſo remarked a ſenſible difference between the durations of the Eclipſes of the firſt, made at the different Nodes, which were alternately longer and ſhorter: that is to ſay the durations of the Eclipſes at the deſcending Node in *Leo*, in the years $168\frac{2}{3}$, $169\frac{2}{3}$, and 1718, were at leaſt $2^h$. $20^m$; whereas at the aſcending Node in *Aquarius*, in the years 1677, 1689, they did not exceed $2^h$. $14^m$; as it plainly appeared by comparing many Obſervations of ſuch Immerſions and Emerſions as were as near together as could be got. And it is manifeſt this difference did not ariſe wholly from the Excentricity of the Orbit, if it have any; but to what cauſe it is owing we

we are hitherto ignorant. In the mean while, till we can get more light in this matter from future Obſervations, it were to be wiſhed that ſome Geometer, in imitation of the great *Newton*, would apply himſelf to the inveſtigating theſe irregularities, from the certain and demonſtrative principles of Gravity.

From the Obſervations we have of the fourth Satellite, it is certain that its Orbit is elliptical: and all our late Obſervations are truly repreſented by ſuppoſing its greateſt Equation equal to that of the Planet *Venus*, or 48′; and that its higher Apſis was in ♓ 8°. 00′. at the beginning of the year 1717. On comparing this hypotheſis with the older Obſervations of the years 1671, 1676, and 1677, the Computations were found to differ greatly from the Obſervations. But putting back the Apſis to ♒ 14°. 00′ at the beginning of the year 1677, thoſe differences almoſt all vaniſhed. Allowing it therefore an equable motion of 6° forward in 10 years, the hypotheſis was found to agree with the intermediate Obſervations, for which reaſon we have followed it in our Tables. And we find our Numbers every where to agree with the Heavens (except only two Obſervations, both juſtly to be ſuſpected) within the ſixth part of a degree.

Our Table of the Equation of Light is made on a ſuppoſition that the Rays paſs equably over a ſpace equal to the diameter of the Earth's Orbit in 14 minutes of time, and it anſwers to all diſtances of *Jupiter* from the Earth when *Jupiter* is neareſt to the Sun. But as the diſtance of this Planet from the Sun, when in its Aphelion, is greater than its neareſt diſtance by one fourth of the diameter of the Earth's Orbit, we found it neceſſary to add another Table for the correction of theſe Equations.

As to the Latitudes of the Satellites, it is certain from the late Obſervations, that the Nodes of the fourth are at this time in $11\frac{1}{2}$ degrees of *Aquarius* and *Leo*; and that thoſe of the third lie very near them. We have therefore aſſigned the ſame places to thoſe of the two inferior Satellites, not having yet found any thing from our Obſervations to the contrary. And if the Nodes of the Satellites were forty years ago in the 15th degree of *Aquarius* and *Leo*, where *Caſſini* places them, (whoſe authority in this matter is of the greateſt weight), they will appear to have gone back about one degree in each Revolution of *Jupiter*. We have retained *Caſſini*'s Inclination of the Orbits of the three inferior Satellites to the Plane of the Orbit of *Jupiter*, 2°. 55′; but we find the Inclination of the Orbit of the fourth to be ſomewhat leſs, that is to ſay 2°. 42′. It is certainly a very difficult matter to determine accurately the ſituation of Circles ſo extremely ſmall, nor is it to be undertaken without exquiſite Telleſcopes.

The Reverend Mr. *Pound* was pleaſed to add, by way of Appendix, the following Tables of his own, for computing the Eclipſes of the firſt Satellite by addition only, after the manner of Mr. *Caſſini*'s elaborate Tables, but much more compendiouſly.

Here follow Mr. *Pound*'s Tables of the firſt Satellite. H h h h.

## *Of the Conſtruction of theſe Tables.*

THESE Tables conſtructed from the preceding, and recommending themſelves by the eaſineſs and ſimplicity of the computation they afford, are deſigned for finding the Longitudes of places on the Earth; for by theſe alone, without the help of any other Tables, the Eclipſes of the firſt Satellite of *Jupiter* may be preſently found by addition only, ſo that the time and trouble of a laborious calculation need not deter ſuch as are not accuſtomed thereto, from theſe ſtudies.

That the Reader may the better comprehend what theſe numbers are, he is to take notice that the Epochs of the Conjunctions are the mean times of the firſt Conjunction of the Satellite with the mean Place of *Jupiter* in the current Julian Year, after ſubtracting $39^m.\ 8^s.$ therefrom, for the time the Satellite is paſſing over an Arc of $5°.\ 31'.\ 36''$, equal to the greateſt Equation of *Jupiter*.

Number A is every where the mean Anomaly of *Jupiter* in thouſandth parts of a Circle, each equal to $21'.\ 36''$. Num. B is the diſtance of the mean Place of *Jupiter* from the true place of the Earth, at the radical Time, in thouſandth parts of a Circle, diminiſhed likewiſe by $15\frac{1}{3}$ of thoſe parts for the greateſt Equation of *Jupiter*.

Hence, the greateſt Equations being ſubtracted from the Epochs, the others become every where additive: Thus the Equation of the Conjunctions is the ſum or difference of $39'.\ 8''$, and of the time in which the Equation of *Jupiter* anſwering to the mean Anomaly A is paſſed over by the Satellite's mean Motion from *Jupiter*; hence it becomes o at Num. A 260, but at Num. A 740 is double the greateſt, or $1^h.\ 18^m.\ 16^s.$ In like manner the Equation to Num. B is the ſum or difference of $15\frac{1}{3}$ parts, and the ſame Equation of *Jupiter* in thouſandth parts of a Circle, applied contrarywiſe, and therefore becomes double, or 31, when Num. A is 260, and o when Num. A is 740. In the Table of Months Num. B encreaſes unequally on account of the inequality of the Sun's motion; therefore if to the collective Num. B its Equation be added, their Sum (or Num. B equated) will be the Angle of Commutation, or the diſtance of the Sun from the heliocentric place of *Jupiter*; and this is the Argument of the ſecond Equation, which is the Equation for the progreſſive motion of Light. The third Equation anſwers to Num. A, and is no other than the correction of the Equation of Light, and is likewiſe additive.

By this artifice, not only all the Equations become additive, but as both the Numbers A & B are of a decimal denomination, they are eaſily collected without any danger of miſtakes.

In Leap Years, after *February*, ſubtract one day from the Times of Conjunction found by the Tables.

## *Of the Tables of* Saturn's *Satellites.*

THESE Tables of the motions of *Saturn*'s Satellites are no other than *Caſſini*'s, reduced to the Meridian of *London* and to the Julian Stile, which that moſt excellent Aſtronomer firſt publiſhed in the year 1716, in the Memoirs of the Royal Academy at *Paris*, and which we juſtly prefer to our own in the Philoſophical Tranſ. N° 356, as they were drawn up in haſte. Theſe Tables indeed are abundantly ſufficient to diſtinguiſh the Satellites among themſelves, and to find their places in reſpect to *Saturn*, which, becauſe of their ſmallneſs, would be hard to find by an indifferent eye; if it did not rightly know where to look for them: However it is evident they were not finiſhed by the renowned Author, but rather were preſented to the Public, that Aſtronomers by their means might conveniently know beforehand thoſe opportunities of making their Obſervations, which might very much conduce towards perfecting the theory of their motions.

Now the Periods of theſe Satellites, in which they revolve to the Equinox or beginning of *Aries*, are ſuppoſed to be theſe, *viz.*

| | d | h | m | s | | d | h | m | s |
|---|---|---|---|---|---|---|---|---|---|
| *Of the firſt* or *inmoſt* | 1 | 21 | 18 | 27 | *Of the ſecond* | 2 | 17 | 41 | 22 |
| *Of the third* or *middle* | 4 | 12 | 25 | 12 | *Of the fourth* (*the* Huygenian) | 15 | 22 | 41 | 12 |
| *Of the fifth* or *outmoſt* | 79 | 7 | 47 | 0 | | | | | |

Now ſuppoſing (according to the general Rule of Nature, at leaſt in this our Syſtem, which obtains as well in the motions of the Satellites of *Jupiter* and the Moon, as in the motions of the primary Planets about the Sun) that the forces tending to the Center of *Saturn* are reciprocally in the duplicate Ratio of the diſtances, and therefore that the Cubes of their diſtances from his Center are as the Squares of the periodic Times; from the diſtance and period of the fourth, the diſtances of the reſt are deduced.

But by late Obſervations with the long Teleſcope of the Royal Society, which is above 120 feet, with the aſſiſtance of a moſt curious Micrometer, Mr. *Pound* found the Ratio of the diſtance of the fourth and greateſt Satellite from the Center of *Saturn*, to be to the Semidiameter of his Ring as 374 to 43, or as 8,7 to 1 nearly; alſo the Ratio of the Diameter of the Ring to that of *Saturn* itſelf to be as 7 to 3. Therefore by computation the diſtances will come out as follows.

| | *Radius of the Ring.* | *Radius of* Saturn. | | *Radius of the Ring.* | *Radius of* Saturn. |
|---|---|---|---|---|---|
| *The firſt* | 2,097 | 4,893 | | | |
| *The ſecond* | 2,686 | 6,268 | *The fourth* | 8,698 | 20,295 |
| *The third* | 3,752 | 8,754 | *The fifth* | 25,348 | 59,154 |

And in this year 1719, on the 29th day of *May* Old Stile, at 10$^h$, Mr. *Pound* obſerving with the ſame Inſtruments, the fourth Satellite was ſeen in its greateſt eaſterly digreſſion, to be diſtant from the Center of *Saturn*, who was then in 7°. 41′ of ♍, three minutes and ſeven ſeconds. Whence, by a juſt computation, the Ratio of this diſtance of the Satellite from *Saturn* is to the diſtance of the Sun from the Earth, as 8,25 to 1000; from which the diſtance of the reſt may be eſtimated.

Now

Now *Caſſini* ſuppoſes the four inferior Satellites to move in the plane of the Ring, or that their Orbits are inclined to the plane of *Saturn*'s Orbit in an Angle of thirty degrees: For when *Saturn* is about the middle of *Gemini* and *Sagittarius*, then the greater Axis of the Ring, which is then of the greateſt width, is found to be nearly double to the leſſer Axis; and theſe Satellites ſeem to deſcribe Ellipſes always ſimilar to that of the Ring; ſo that in their greateſt digreſſions from the Planet they are found in the greater Axis of the Ring produced: Which things could not happen, unleſs the Orbits of the Satellites had almoſt the ſame ſituation with the plane of the Annulus or Ring.

But lately the famous Aſtronomer *Miraldus*, with the beſt of Teleſcopes, and eyes more than Lyncean, has ſought for the Nodes of the Ring; as may be ſeen in the *Mem. Roy. Acad. of Paris* for the years 1715 and 1716. For he demonſtrates from very ſubtil Obſervations, that the plane of the Ring in the year 1715, interſected the plane of *Saturn*'s Orbit at the 19°. 45′ of *Virgo* & *Piſces*; and granting the Angle of Inclination to be 30 degrees, the ſame plane of the Ring interſected the plane of the Ecliptic or Orbit of the Earth, in the $16°\frac{1}{4}$ of ♍ & ♓, being inclined to it in an Angle of 31°. 20′.

In order therefore, at any given time, to know exactly the poſition, ſpecies, and points of the Apogee and Perigee, both of the Ellipſes of the Ring, and of thoſe which the Satellites deſcribe, we muſt reſolve an oblique angled ſpherical Triangle, as was ſhewn before in the Precepts for calculating the Latitudes of *Jupiter*'s Satellites.

Now as the Latitude of the Earth, in reſpect of the Orbit of *Saturn*, ſcarce ever exceeds the fourth part of a degree, it may, in this affair not yet ſufficiently known, be ſafely neglected, as if both Planets moved in the ſame Orbit. Wherefore, from the geocentric place of *Saturn*, ſubtract 5 ſig. 19°. 45′, and there will remain the Argument of Latitude; with which, in *Tabulâ Latitudinariâ Satellitum* I. II. III. IV. (K k k k 2) take the Inclination, which is the Angle wherein a viſual Ray drawn from the Earth to *Saturn* is inclined to the Orbits of theſe Satellites: And whoſe Sine is to Radius, as the leſſer Diameters of theſe apparent Orbits are to the greater: And let the Ellipſis of the Ring be of the ſame ſpecies, the apogean Semicircle lying towards the North, if the Argument of Latitude be leſs than ſix Signs, but toward the South if greater. We have added alſo a *Table of Reductions*, neceſſarily requiſite, in ſo great an inclination of the planes, for the knowledge of the true Apogee of the Satellites,

Moreover the moſt excellent *Caſſini* has lately diſcovered, that the fifth and outward Satellite is carried round in an Orbit very different from the reſt; its aſcending Node being found to be in 5°. 00′ of ♍, with an Angle of Inclination of 15° only, or of half the former. Wherefore we have accommodated alſo to this a Table of Inclination and Reduction.

# SYNOPSIS

## OF THE

# ASTRONOMY of COMETS.

THE antient *Egyptians* and *Chaldeans*, if we may credit *Diodorus Siculus*, by a long courſe of Obſervations, were ſaid to be able to predict the Appariti-ons of Comets. But ſince they are alſo ſaid, by the help of the ſame arts, to have prognoſticated Earthquakes and Tempeſts, 'tis paſt all doubt, that their knowledge in theſe matters, was the reſult rather of meer aſtrological predictions, than of any aſtronomical Theories of the celeſtial motions. And the *Greeks*, who were the con-querors of both thoſe people, ſcarce found any other ſort of learning amongſt them, than this. So that 'tis to the *Greeks* themſelves as the inventors, and eſpecially the great *Hipparchus*, that we owe the Aſtronomy we have, and which is now improved to ſuch a height. But yet among the *Greeks*, the opinion of *Ariſtotle*, who would have Comets to be nothing elſe, but ſublunary vapours, or airy meteors, prevailed ſo ſo far, that this moſt difficult part of the Aſtronomical Science lay altogether neg-lected; for no body thought it worth while to take notice of, or write about, the wandering uncertain motions of what they eſteemed vapours floating in the Ether; whence it came to paſs, that nothing certain concerning the motions of Comets, can be found tranſmitted from them to us.

But *Seneca* the Philoſopher, having conſidered the phænomena of two remarkable Comets of his time, made no ſcruple to place them amongſt the celeſtial Bodies; be-lieving them to be Stars of equal duration with the World, tho' he owns their moti-ons to be governed by laws not then known or found out. And at laſt, which was no untrue or vain prediction, he foretells, that there ſhould be ages ſome time here-after, to whom *time and diligence ſhould unfold all theſe myſteries*, and who ſhould wonder how 'twas poſſible the *Antients* could be ignorant of them, after ſome lucky interpreter of nature had ſhewn, *in what parts of the Heavens the Comets wandered, what ſort of Beings, and how great they were.* Yet almoſt all the Aſtronomers differed from this opinion of *Seneca*; neither did *Seneca* himſelf think fit to ſet down thoſe phænomena of the motion, by which he was enabled to maintain his opinion; nor the times of thoſe appearances, which might be of uſe to poſterity, in order to deter-mine theſe things. And indeed in turning over many hiſtories of Comets, I find no-thing at all that can be of ſervice in this affair before A. D. 1337. At which time *Nicephorus Gregoras*, a *Conſtantinopolitan* Hiſtorian and Aſtronomer, did pretty ac-curately deſcribe the paths of a Comet amongſt the fixed Stars, but was too lax as to the account of the time; ſo that this moſt doubtful and uncertain Comet only de-ſerves to be inſerted in our Catalogue for the ſake of its appearing near four hundred years ago.

The next of our Comets appeared in the year 1472, which is the ſwifteſt of all, and neareſt to the Earth; *Regiomontanus* obſerved it. This Comet, ſo fearful upon the account both of the magnitude of its body, and tail, moved forty degrees of a great Circle in the Heavens, in the ſpace of one day; and was the firſt, of which any proper Obſervations are come down to us. But all thoſe who conſidered Comets, until the time of *Tycho Brahe*, that great reſtorer of Aſtronomy, believed them to be below the Moon, and ſo took but little notice of them, reckoning them to be no other than vapours.

In the year 1577, *Tycho* ſeriouſly purſuing the ſtudy of the Stars, and having procured large inſtruments for the performing of celeſtial Menſurations, with far greater care and certainty than the Antients could ever hope for, there appeared a remarkable Comet; to the Obſervation of which *Tycho* vigorouſly applied himſelf; and found by many juſt and faithful trials, that it had no diurnal Parallax that was perceptible: And conſequently was no aerial vapour, but alſo much higher than the Moon; nay, might be placed amongſt the Orbs of the Planets, for any thing that appeared to the contrary; the cavilling oppoſition, made by ſome of the Schoolmen in the mean time, being to no purpoſe.

*Tycho* was ſucceeded by the moſt ſagacious *Kepler*. He having the advantage of *Tycho*'s Labours and Obſervations, found out the true Phyſical Syſtem of the World, and vaſtly improved the Science of Aſtronomy.

For he demonſtrated that *all the Planets perform their Revolutions in Elliptic Orbits, whoſe planes paſs thro' the Center of the Sun*; obſerving this law, that *the Areas of the elliptic Sectors, taken at the Center of the Sun, which he proved to be in the common focus of theſe Ellipſes, are always proportional to the times in which the correſponding elliptical Arcs are deſcribed.* He diſcovered alſo, that *the diſtances of the Planets from the Sun are in the ſeſquialter Ratio of the periodical Times*; or, which is all one, that *the Cubes of the diſtances are as the Squares of the times.* This great Aſtronomer had the opportunity of obſerving two Comets, one of which was a very remarkable one. And from the Obſervations of theſe, which afforded ſufficient indications of an annual Parallax, he concluded, that *the Comets moved freely thro' the Planetary Orbits, with a motion not much different from a rectilinear one; but of what kind he could not then determine.* Next, *Hevelius*, a noble emulator of *Tycho Brahe*, following *Kepler*'s ſteps, embraced the ſame hypotheſis of the rectilinear motion of the Comets, himſelf accurately obſerving many of them. Yet he complained that his Calculations did not perfectly agree to what he obſerved in the Heavens: And ſuſpected, that *the path of a Comet was bent into a curve line concave towards the Sun.*

At length came that prodigious Comet of the year 1680, which deſcending, almoſt perpendicularly towards the Sun, aroſe from him again with as great a velocity. This Comet, which was ſeen for four months continually, by the very remarkable and peculiar curvature of its Orbit, above all others, gave the fitteſt occaſion for inveſtigating the Theory of its motion. And the Royal Obſervatories, at *Paris* and *Greenwich*, having been for ſome time founded, and committed

committed to the care of moſt excellent Aſtronomers, the apparent motion of this Comet was moſt accurately, perhaps as far as human ſkill could go, obſerved by Mr. *Caſſini* and Mr. *Flamſteed*.

Not long after, that great Geometrician the illuſtrious *Newton*, writing his *Mathematical Principles of Natural Philoſophy*, demonſtrated not only what *Kepler* had found, did neceſſarily obtain in the planetary Syſtem; but alſo, that all the phænomena of the Comets would evidently follow from the ſame principles; which he abundantly illuſtrated by the example of the ſaid Comet of the year 1680, ſhewing at the ſame time, a method of delineating the Orbits of Comets geometrically; therein ſolving, not without meriting the higheſt admiration of all men, a Problem whoſe intricacy rendered it ſcarce acceſſible to any but himſelf. This Comet he proved to move round the Sun in a parabolical Orb, and to deſcribe Area's, taken at the Center of the Sun, proportional to the times.

Wherefore, following the ſteps of ſo great a man, I have attempted to bring the ſame method to an arithmetical Calculation; and that not without ſucceſs. For, having collected all the Obſervations of Comets I could, I have framed the following Table, the reſult of a prodigious deal of calculation: Which, though but ſmall in bulk, will be no unacceptable preſent to Aſtronomers. For theſe numbers are capable of repreſenting all that has been yet obſerved about the motion of Comets, by the help only of the annexed general Table; in the making of which, I ſpared no labour, that it might come forth perfect, as a thing conſecrated to poſterity, and to laſt as long as the Science of Aſtronomy itſelf.

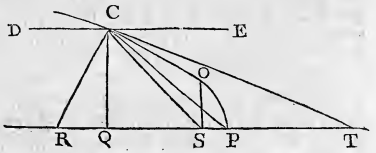
This Table of the Elements (M m m m 2) conſiſts of ten Columns, whereof the *firſt* gives the years wherein the Comets were ſeen. The *ſecond* and *third* exhibit the poſition of the planes of the Comets Orbits; that is, the points of the Ecliptic where their aſcending Nodes were at the time they appeared, and the Angle of their Orbits Inclination to the Ecliptic. The *fourth* gives the places of their Perihelions, or the Vertices of their parabolic Orbits, reckoned in their own Orbits. The *fifth* gives the leaſt diſtances of the Comets from the Sun in their Perihelions, in ſuch parts as the mean diſtance of the Sun from the Earth contains 100000. In the *ſixth* are the Logarithms of the Ratios of thoſe diſtances to that mean diſtance from the Sun. The *ſeventh* contains the Logarithms of their mean diurnal motions, the time in which the Comet traverſes ninety degrees of its Orbit from the Perihelion, being ſuppoſed to be divided into a hundred parts. The *eighth* exhibits the equated times of the Perihelions for the Meridian of *London* and *Julian* Stile. The *ninth* gives the Angles in the planes of their Orbits intercepted between their Perihelions and aſcending Nodes, by means whereof the calculus becomes ſomewhat eaſier. Finally, the *tenth* ſhews which of their motions were according to the order of the Signs, and which on the other hand were retrograde.

Then follow the Tables for the Motions of Comets.

AS the Planets move in elliptic Orbits, ſo do the Comets (as 'tis ſaid) in parabolic ones, having the Sun in their common Focus, and deſcribe equal Areas in equal times. Now ſince all Parabola's are ſimilar Curves, therefore if any determinate part of the Area of a given Parabola be divided into any number of parts, by right lines drawn from the Focus; there will be a like diviſion made in all Parabola's under the ſame Angles, and their reſpective diſtances from the Focus are proportional: Conſequently this one Table of ours will ſerve for all Comets.

Now the manner of calculating this Table is thus derived.

In the Fig. let S be the Sun, P O C the Orbit of a Comet, P the Perihelion, O the place where the Comet is 90° diſtant from the Perihelion, C any other place. Draw the right lines C P, C S, and make S T, S R, equal to C S; and having drawn the right lines C T, C R, (whereof the one is a Tangent, and the other a perpendicular to the Curve) draw C Q perpendicular to the Axis P S R.




Now any Area being given, as C O P S $= a$; 'tis required to find the Angle C S P, and the diſtance C S.

From the nature of the Parabola R Q is ever equal to half the Parameter to the Axis, and conſequently if the Parameter be put $= 2$, then R Q $= 1$.

Let C Q $= z$; then P Q $= \frac{1}{2}zz$; and the parabolic Segment C O P $= \frac{1}{12}zzz$. But the Triangle C S P will be $= \frac{1}{4}z$; and ſo the mixtilineal Area C O P S will be $\frac{1}{12}z^3 + \frac{1}{4}z = a$; whence $z^3 + 3z = 12a$: Wherefore reſolving this cubic Equation, $z$ or the ordinate C Q will be known. Now let the Area O P S be propoſed to be divided into one hundred equal parts. This Area is $\frac{1}{12}$ of the Square of the Parameter; and conſequently $12a$ is equal to that Square $= 4$. If therefore the Roots of theſe Equations $z^3 + 3z = 0{,}04$; $0{,}08$; $0{,}12$; $0{,}16$, *&c.* be ſucceſſively extracted, there will be obtained ſo many Values of $z$, or Ordinates C Q reſpectively, and the Area S O P will be divided into one hundred equal parts. And in like manner is the Calculus to be continued beyond the place O. Now the Root of this Equation, ſince R Q is $= 1$, is the tabular Tangent of the Angle C R Q, or half the Angle C S P, wherefore the Angle C S P is given. And R C, the ſecant of the ſame Angle C R Q, is a mean proportional between R Q $= 2$ P S, or unity, and R T, which is the double of S C, as is evident from Conics. Therefore S P is to S C in the duplicate Ratio of the Radius to the ſecant of half the Angle from the Perihelion of the Comet; or elſe in the Ratio of the verſed Sine of the Angle C S R, or of the Angle from the Comet's Aphelion, to the Diameter of the Circle. After this manner therefore, I compoſed the foregoing Table, which ſerves to repreſent the motions of all our Comets, of which hitherto there has been none obſerved, but come within the laws of the Parabola. *.

* Except that of 1680, which the Doctor calculates for an Elliptic Orbit.

It remains now to give the Rules for the Calculation, and to ſhew how the apparent place of a Comet may be determined by theſe numbers. Now *the velocity of a Comet moving in a parabola, is every where to the velocity of a Planet deſcribing a circle about the Sun, at the ſame diſtance from the Sun, as* $\sqrt{2}$ *to* 1, as appears from *Cor.* 7. *Prop.* 16. *Lib.* I. *of the Princp. Phil. Nat. Math.* If therefore a Comet in its Perihelion was ſuppoſed to be as far diſtant from the Sun as the Earth is, then the diurnal Area, deſcribed by the Comet, would be to the diurnal Area deſcribed by the Earth, as $\sqrt{2}$ to 1. And conſequently the time of the ſynodical Year, or $365^{d}.\ 6^{h}.\ 9^{m}$, is to the time in which ſuch a Comet would deſcribe the Quadrant of its Orbit from the Perihelium, or the Area analogous to the ſpace P O S, as the Area of a circle, or 3,14159 *&c.* to the parabolic Area $= \frac{4}{3} \times \sqrt{\frac{1}{2}} = \frac{2}{3}\sqrt{2}$. Therefore the Comet would deſcribe that Quadrant in 109 days, 14 hours, 46 minutes; and ſo the parabolic Area P O S being divided into 100 parts, to each day there would be allotted 0,912280 of thoſe parts; the Logarithm whereof, *viz.* 9,960128, is to be kept for continual uſe. But then the times in which Comets, at a greater or leſs diſtance, would deſcribe ſimilar Quadrants, are as the times of the revolutions in circles, that is, in the ſeſquiplicate Ratio of the diſtances: Whence the diurnal Areas eſtimated in centeſimal parts of the Quadrant (which parts we put for meaſures of the mean motion, like degrees of Anomaly) are in each, in the ſeſquialter Ratio of the diſtance from the Sun in the Perihelion.

Theſe things being neceſſarily premiſed, let it be propoſed to compute the apparent place of any one of the forementioned Comets for any given time.

1$^{ſt}$. *Let the Sun's place be had, and the log. of its diſtance from the Earth.*

2$^{d}$. *Take the difference between the given time and the time of the Perihelion, taken from the eighth column of the Elements, in days and decimal parts of a day: To the Logarithm of this number, let there be added the conſtant Logarithm* 9,960128, *and the complement arithmetical of once and a half the Logarithm of the diſtance of the Perihelion from the Sun: Their Sum will be the Logarithm of the Comet's mean Motion, to be ſought in the firſt column of the general Table.* But this may be obtained in a ſhorter way, *viz.* by only adding the Logarithm of the time to the Logarithm of the mean diurnal motion taken out of the ſeventh column.

3$^{d}$. *With the mean Motion, let there be taken the correſpondent Angle from the Perihelion in the Table, and the Log. for the diſtance from the Sun: Then if the time be after the Perihelion, in Comets that are direct, add, and in retrograde ones, ſubtract, the Angle thus found, to or from the Perihelion (in col.* 4*th). Or if the time be before the Perihelion, in direct Comets, ſubtract, and in retrograde ones add, the foreſaid Angle to or from the place of the Perihelion; and ſo we ſhall have the place of the Comet in its Orbit. And to the Log. for the diſtance there found, let there be added the Log. of the diſtance in the Perihelion, (col.* 6*th) and the Sum will be the Log. of the true diſtance of the Comet from the Sun.*

4th. *The place of the Node, (col. 2) together with the place of the Comet in its Orbit being given, let the diſtance of the Comet from the Node be found; then the Inclination of the Plane being given, (col. 3) there will be given alſo, from the common rules of Trigonometry, the Comet's place reduced to the Ecliptic, the Inclination, or heliocentric Latitude, and the Log. of the curtate diſtance.*

5th. *From theſe things given, by the very ſame rules that we find the Planet's places, from the Sun's place and diſtance given, we may obtain the apparent or geocentric place of the Comet, together with the apparent Latitude. And this it may be proper to illuſtrate by an Example or two.*

## EXAMPLE I.

*Let it be required to find the place of the Comet of the year* 166$\frac{4}{5}$, March 1d. 7h. 00m, P. M. London. *That is* 96d. 19h. 8m, *after the Perihelion, which happened* November 24d. 11h. 52m.

| | | | ° | ′ | ″ | | |
|---|---|---|---|---|---|---|---|
| Log. diſt. Perihel. | 0,011044 | Perihel. | ☊ 10 | 41 | 25 | Log. for diſt. | 0,255369 |
| Log. Seſquial. | 0,016566 | Ang. correſp. | 83 | 38 | 05— | Log. Perihel. | 0,011044 |
| Comp. Arith. | 9,983434 | Com. in Orb. | ♉ 17 | 3 | 20 | Co-ſin. Incl. | 9,990754 |
| | 9,960128 | Aſcen. ☊ | ♊ 21 | 14 | 00 | Log. Curt. diſt. | 0,257167 |
| Log. Time | 1,985862 | Com. à Node | 34 | 10 | 40 | Log. diſt. ☉ | 9,997939 |
| Log. Me. Mot. | 1,929424 | Red. to Eclip. | 32 | 19 | 05 | ☉ ☌ | 21.44.33 |
| Mean Mot. | 85,001 | Com. Helio. | ♉ 18 | 54 | 55 | Com. Ap. pl. | ♈ 29.18.20 |
| | | Inclin. North. | 11 | 46 | 40 | Ap. lat. | 8.36.15N. |

## EXAMPLE II.

*Let it be required to find the place of the Comet of the year* 1683, July 23, 33h. 35m, P. M. London. *Or* 13h. 40m, *Equated Time. That is* 21d. 10h. 50m, *after the Perihelion.*

| | | | ° | ′ | ″ | | |
|---|---|---|---|---|---|---|---|
| Log. diſt. Perihel. | 9,748343 | Perihel. | ♊ 25 | 29 | 30 | Log. for diſt. | 0,111336 |
| Log. Seſquial. | 9,622514 | Ang. correſp. | 56 | 47 | 20 | Log. Perihel. | 9,748343 |
| Comp. Arith. | 0,377486 | Com. in Orb. | ♈ 28 | 42 | 10 | Co-ſine Inclin. | 9,913187 |
| | 9,960128 | | ♉ ☌ ♓ | 23 | 23 | 00 | Log. Curt. diſt. | 9,772866 |
| Log. Time | 1,310723 | Com. à ♉ | 35 | 19 | 10 | Log. diſt. ☉ | 0,006062 |
| Log. Me. Mot. | 1,648337 | Red to Eclip. | 4 | 48 | 30 | ☉ Place | ☊ 10.39.14 |
| Mean Mot. | 44,498 | Com. Helioc. | ♓ 28 | 11 | 30 | Com. Ap. pl. | ♋ 5.11.28 |
| | | Inclin. North. | 35 | 2 | 00 | Lat North. | 28.52.13 |

At the time ſpecified in the firſt Example, 'twas obſerved * from the ſeparate Obſervations of *Azoutio* and *P. Gottignio*, that the apparent place of this Comet, was ſo near the ſecond Star of *Aries*, that it was not above nine or ten minutes more northerly, and as to the Longitude it nearly agreed †. But at the time of the ſecond Example, I myſelf, near *London*, with the ſame Inſtruments whereby I formerly obſerved the ſouthern Conſtellations, found the place of the Comet to be ♋. 5°. 11$\frac{1}{2}$, with 28°. 51′ North Latitude, which agreed exactly with the Obſervation made at *Greenwich*, almoſt at the very ſame moment.

* At *London*.

† According to Dr. *Hook*'s Obſervation it was 3′ to the Eaſt.

As for the Comet of the year 1680, which came almoſt to the Sun itſelf, being in its Perihelion, not above one third of the Sun's Semidiameter diſtance from the ſurface of it, as the Parameter of its Orb is ſo very ſmall, it could hardly be contained within the limits of the general Table, becauſe of the exceſſive velocity of the mean Motion. Wherefore, in this Comet, the beſt way will be, after the mean Motion is found, to get from thence, by the help of the foregoing Equation $z^3 + 3z = \frac{4}{100}$ of the mean Motion, the Tangent of half the Angle from the Perihelion, together with the Log. for the diſtance from the Sun. Which being found, we are to proceed by the ſame Rules as in the preceding.

After this manner therefore, the Aſtronomical Reader may examine theſe Numbers, which I have calculated with all imaginable care, from the Obſervations I could collect. And I have not thought fit to make them public before they have been by myſelf duly examined, and made as accurate as 'twas poſſible, but at the expence of the labour of many years.

Now it may be proper to inform the Reader, that our five Comets, firſt mentioned in the Table, whereof the third and fourth was obſerved by *Peter Apian*, the fifth by *Paulus Fabricius*, as alſo the tenth ſeen by *Michael Mæſtlin* in the year 1596, are not ſo certain as the reſt; for the Obſervations were made neither with ſufficient Inſtruments, nor due care, and on that account are diſagreeing with themſelves, and can by no means be reconciled with a regular computus. The Comet which appeared in the year 1684 was only taken notice of by *Blanchinus*, who obſerved it at *Rome:* And the laſt which appeared in the year 1698, was ſeen only by the *Pariſian* Obſervers, who determined its courſe in a very uncommon manner. This Comet was a very obſcure one, and altho' it moved ſwift, and came near enough to our Earth; yet we, who are not wont to be incurious in theſe matters, ſaw nothing of it. For want of Obſervations I have alſo left out of the foregoing Catalogue, thoſe two remarkable Comets which have happened in this our age, one in *November* 1689, the other in *February* 1702. For they directing their courſes towards the ſouthern parts of the World, and being ſcarce conſpicuous any where in *Europe*, met with no Obſervers proper for this purpoſe.

By comparing together the Elements of the motions of theſe Comets, 'tis apparent their Orbits are diſpoſed in no manner of order; nor can they, as the Planets are, be comprehended within a Zodiac, moving indifferently every way, as well retrograde as direct; from whence it is clear, they are not carried about, or moved in a vortical ſyſtem. Moreover the diſtances in their Perihelia are ſometimes greater, ſometimes leſs; which makes me ſuſpect there may be a far greater number of them, which may move in Regions more remote from the Sun; and being therefore very obſcure, and without tails, may paſs by us unſeen.

Hitherto I have conſidered the Orbits of Comets as exactly parabolical; upon which ſuppoſition it would follow, that Comets, being impelled towards the Sun by a centripetal force, would deſcend as from ſpaces infinitely diſtant; and by their falling acquire ſuch a velocity, as that they may again fly off into

into the remoteſt parts of the Univerſe, moving upwards with a perpetual tendency, ſo as never to return again to the Sun. But ſince Comets appear frequently enough, and as none of them are found to move with an Hyperbolic Motion, or a motion ſwifter than they might acquire by their gravity towards the Sun, it is highly probable they rather revolve about the Sun in very excentric elliptic Orbits, and make their returns after long periods of time: For ſo their numbers will be determinate, and, perhaps, not ſo very great. Beſides, the ſpace between the Sun and fixed Stars is ſo immenſe, that there is room enough for a Comet to revolve, tho' the period of its revolution be vaſtly long. Now the Parameter of an Ellipſis, is to the Parameter of a Parabola having the ſame Perihelion diſtance, as the Aphelion diſtance in the Ellipſis, is to the tranſverſe Axis in the Ellipſes: And the velocities are in the ſubduplicate Ratio of the Parameters: Which in very excentric Orbits, the Ratio comes very near to a Ratio of Equality: And the very ſmall difference which happens, on account of the greater velocity in the Parabola, is eaſily compenſated in determining the ſituation of the Orbit. The principal uſe therefore of this Table of the Elements of their motions, and that which indeed induced me to conſtruct it, is, that whenever a new Comet ſhall appear, we may be able to know, by comparing together the Elements, whether it be any of thoſe which has appeared before, or not; and conſequently to determine the Axis of its Orbit, its Period, and to foretel its return.

## *Of the Motion of Comets in Elliptic Orbits.*

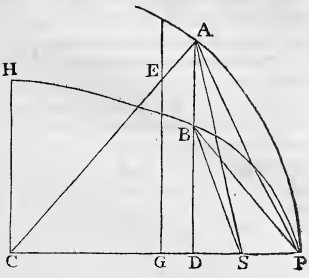
SOON after I had compleated the foregoing Table of Elements (which was many years ago) I ſuſpected, from the like ſituation of their Planes and Perihelions, that the Comets which appeared in the years 1531, 1607, and 1682, were one and the ſame Comet that had made three Revolutions in its Elliptic Orbit. But as the difference of their Periods and Inclinations, was ſomewhat too great, to be reconciled with what I had imagined, and as I judged the Obſervations made by *Apian* and *Kepler* upon the former ones, were not ſufficiently accurate, not to ſay too rude, to determine an affair of ſuch ſubtilty; I was content when I publiſhed at firſt this Synopſis in the year 1705, to hint at theſe my conjectures, as having ſome degree of probability; and to adviſe poſterity carefully to watch for its return about the expected year 1758. But afterwards when I had carefully ſearched into the Catalogues of antient Comets, and diſcovered that three others had preceded the aforeſaid three, manifeſtly in the ſame order, and at like intervals of time *(viz.* in the year 1305 about *Eaſter*, in the year 1380 the month unknown, and laſtly in the month of *June* 1456), I began to be much more confirmed in my former opinion: And having obtained a method by which the calculation may be accurately and eaſily managed for any elliptic Orbit however excentric, inſtead of the parabolic trajectory of the Comet of the year 1682, deſcribed in the Elements, I attempted to reduce its poſition in reſpect to the Plane of the Ecliptic and of the Earth moving in it, unto an Ellipſis of a given magnitude and kind, in whoſe Focus the Sun is placed; ſo that all Mr. *Flamſteed*'s Obſervations on this Comet, taken with a very large and very accurate Sextant, and due corrections being made for the Refractions, might abundantly confirm my Theory ſubjected to the examination of ſo rigid a computation.

Now it is manifeſt that two Periods of this Comet are finiſhed in 151 years nearly, and that each alternately, the greater and the leſs, are compleated in about 76 and 75 years; wherefore taking the mean Period to be 75 years and a half, then (by Prop. 15. Book I. of the Principia) the ſemitranſverſe Axe of the Comet's Orbit is to the mean diſtance of the Earth from the Sun, as $\overline{75\frac{1}{2}}^{\frac{2}{3}}$, that is as 17,8635 to 1. But having found the perihelion diſtance moſt agreeable to Obſervations to be 0,5825 of thoſe parts, the Excentricity of the Orbit becomes 17,2810, whence half the leſſer Axis is 4,5246. I found the Plane of this Ellipſis to be inclined to the Plane of the Ecliptic in an Angle of 17°. 42′, and to have its aſcending Node in ♉ 20°. 48′; but that the Perihelion of the Comet, which was retrograde in this Plane, was in ♒ 1°. 36′, or 109°. 12′ after the aſcending Node. And that the equated time of the Perihelion was *September* 4ᵈ. 21ʰ. 22ᵐ. Alſo that its mean diurnal motion was $\frac{1}{75\frac{1}{2}}$ part of the mean diurnal motion of the Sun, or 0°. 0. 47″ as near as can be. And the Radius being 1, the length of the Arc 0′. 47″ that is 0,000227843, is as the diurnal motion of the Comet at the extremity of the leſſer Axis, and has the ſame Ratio to the circumference of a Circle, as one day has to the periodic time, and which the elliptic Area daily intercepted between Rays drawn to the Sun, has to the Area of the whole Ellipſis; which may therefore be very conveniently taken for the meaſure of the Comet's mean Motion. Therefore its Logarithm 6,3357636 added to the Logarithm of the time from the Perihelion, gives the Logarithm of the mean Motion for the given time, or of the Ratio of the Area cut off by Rays drawn from the Sun to the Comet's place in its Orbit and to the Perihelion, to the whole Area of the Ellipſis.

But this Area is compounded of two, namely of the Area of a Triangle, whoſe Baſe is the perihelion diſtance of the Comet, the altitude being the correſponding ordinate; and of the Area of a Segment cut off by a chord drawn from the vertex of the Ellipſis to the Comet. Which perhaps to ſome it will be convenient to explain fully by a ſcheme.

Let C P be the greater Semiaxis of the Comet's elliptic Orbit P B H, C H the leſſer Semiaxis, P A a Circle circumſcribing the Ellipſis, and S the Focus; whence P S is the perihelion diſtance, and C S the Excentricity of the Orbit. Let the place of the Comet be in B, from whence draw B D an Ordinate to the Axis, which produced may meet the Circle in A, draw the right Lines A P, A S; B P, B S; and in the right Line C A take C E equal to C S, and draw E G perpendicular to the Axis. Now it is evident, from the approved Diſcoveries of *Kepler*, that the Area

Area P S A P is to the Area of the whole Circle, and likewiſe P S B P to the Area of the whole Ellipſis, as the time in which the Comet deſcribes the Arc B P to the periodic Time of its making an intire revolution in the Ellipſis. But the Area P S A P is compoſed of the circular Segment A P A and of the Triangle P S A, of which Triangle, P S × A D, the Sine of the Angle A C P, is double; but twice the Segment is the exceſs of the Arc A P above the Sine A D multiplied by the Radius C P. Make the Radius C P = 1, and P S = $b$, and any given Area P A S P = $a$; and let it be required to find A D = $z$ the Sine of the Anomaly of the Excentric A C P. Now $zb$ is double the Triangle P S A; and according to the known Theorem, the circular Arc AP = $z + \frac{1}{6}z^3 + \frac{3}{40}z^5 + \frac{5}{112}z^7$ &c. whence double the Area of the Segment PA P, becomes $\frac{1}{6}z^3 + \frac{3}{40}z^5 + \frac{5}{112}z^7$ &c. And therefore $2a = bz + \frac{1}{6}z^3 + \frac{3}{40}z^5 + \frac{5}{112}z^7$ &c. Now the Root $z$ of this Equation being extracted, gives the Anomaly of the Excentric A C P, and its verſed Sine P D: And if it be made as C P to C S ſo P D to S G, P G = S G + P S will be equal to B S the diſtance of the Comet from the Sun. Finally ſay as C P is to C H ſo is A D to B D, which will be the Sine of the true Anomaly, or of the Angle P S B to the Radius B S.




But as the method of extracting the Root of this Equation is by no means obvious, and not generally to be done in every caſe but by trials; wherefore to leſſen the trouble of the calculation, I have, according to the principles now laid down, drawn up the following Table, of the ſame form almoſt with the general Table for the parabolic Motion; by means of which, all the Obſervations made at *Greenwich* of the Comet of the year 1682 are fitly enough repreſented.

In compoſing this Table I made uſe of the artifice which *Kepler* did in making his *Rudolphine Tables*. For by making the Angle of the Anomaly of the Excentric A C P to be equally increaſed; in the ſecond column under the title of the mean Motion you have the double of the Area of the mixtilinear ſpace P A S P, compounded of the difference of the Arc A P and Sine A D into the Radius C P = 1, and of the Rectangle P S × A D taken together; that is, by taking P S to 1 in the Ratio which half the greater Axis 17,8635 has to 0,5825 the perihelion diſtance; whence P S is 0,0326085, and its Logarithm 8,513331. The fourth column exhibits the Angle P S B of the true Anomaly from the Perihelion; and the ſixth the Logarithm of the Ratio which P S has to the diſtance S B reſpectively. The other columns give the differences of the former, from whence the proportional parts are more readily obtained. But this Table will not hold good in Ellipſes that are not ſimilar to this of ours.

Then follow the Tables.

Here follows an example of this calculation. In the year 1682, *Auguſt* 30$^{d}$. 7$^{h}$. 42$^{m}$ equated time at *Greenwich*, it was found, by repeated and accurate Obſervations, that the place of the Comet, the Refraction being ſubducted, was in ♎ 15°. 34′. 42″, and its Latitude 17°. 24′. 56″. Now let us ſee with what ſucceſs our computation will agree with this.

The time propoſed preceded the Perihelion of the Comet 5$^{d}$. 13$^{h}$. 40$^{m}$, or in decimal parts 5,5694 days. The Logarithm of this number 0,7458111 added to the Logarithm of the daily Motion 6,357636 gives the Logarithm of the number 0,0012689 6 for the mean Motion of the Comet before the Perihelion. In the Table I find for 2°. 12′ of the Anomaly of the Excentric, the mean Motion 0,0012612 0, is leſs than that given, by 776 parts of which 11655 increaſe the Angle from the Perihelion 1°. 31′. 4″, and the Logarithm for the diſtance from the Sun, by the difference 1760: Having added therefore to the Angle 16°. 57′. 55′, and to the Logarithm 0,009396, which in the Table correſpond to that mean Motion, the proportional parts reſpectively, the Angle of the true motion from the Perihelion becomes 17°. 3′. 58″, and the Logarithm for the diſtance from the Sun 0,009513, the Logarithm of that diſtance becomes 9,774809. To the place of the Perihelion which is in ♒ 1°. 36′, add 17°. 3′. 58″, and it will give the place of the Comet in its Orbit in ♒ 18°. 39′. 58″, but reduced to the Ecliptic ♒ 18°. 33′. 36″, with the heliocentric Latitude 17°. 41′. 14″ North; whence the Logarithm of the curtate diſtance is 9,7753779. At the ſame time the Sun was in ♍ 17°. 20′. 54″, and the Log. of his diſtance from the Earth 0,002395. From theſe things given it follows that the geocentric place of the Comet was in *Libra* 15°. 35′. 58″, and its Latitude 17°. 24′. 11″, erring in the Longitude 1′. 16″, but in the Latitude only 0′. 45″.

By comparing in this manner the Theory now explained with all the Obſervations of Mr. *Flamſteed*, I have found that the Heavens agreed with this elliptic Motion, the differences not deſerving notice, as appears from the Table annexed.

| 1682 App. Time. | | | Comet's Long. by Obſerv. | | | Lat. N. Obſervat. | | | Comet's Long. by Comput. | | | Lat. N. Comput. | | | Differ. Longit. | | | Differ. Latit. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | h | m | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | | ′ | ″ | | ′ | ″ |
| *Aug.* 19 | 16 | 38 | ♌ 18 | 15 | 5 | 25 | 49 | 19 | ♌ 18 | 14 | 19 | 25 | 48 | 33 | — | 0 | 46 | — | 0 | 46 |
| 20 | 15 | 38 | 24 | 47 | 55 | 26 | 11 | 50 | 24 | 48 | 5 | 26 | 11 | 40 | + | 0 | 10 | — | 0 | 10 |
| 21 | 8 | 21 | 29 | 37 | 51 | 26 | 15 | 15 | 29 | 39 | 3 | 26 | 18 | 3 | + | 1 | 12 | + | 2 | 48 |
| 21 | 16 | 19 | ♍ 1 | 58 | 0 | | | | ♍ 1 | 58 | 23 | | | | + | 0 | 23 | | | |
| 22 | 8 | 8 | 6 | 30 | 8 | 26 | 4 | 35 | 6 | 32 | 10 | 26 | 6 | 37 | + | 2 | 2 | + | 2 | 2 |
| 29 | 8 | 20 | ♎ 12 | 35 | 55 | 18 | 37 | 27 | ♎ 12 | 38 | 19 | 18 | 35 | 3 | + | 2 | 24 | — | 2 | 24 |
| 30 | 7 | 45 | 15 | 34 | 42 | 17 | 24 | 56 | 15 | 35 | 58 | 17 | 24 | 11 | + | 1 | 16 | — | 0 | 45 |
| *Aug.* 31 | 8 | 21 | 18 | 16 | 20 | | | | 18 | 17 | 30 | | | | + | 1 | 10 | | | |
| *Sept.* 1 | 7 | 33 | 20 | 28 | 12 | 15 | 11 | 37 | 20 | 29 | 31 | 15 | 11 | 23 | + | 1 | 19 | — | 0 | 14 |
| 4 | 7 | 22 | 25 | 39 | 36 | 12 | 22 | 29 | 25 | 39 | 34 | 12 | 22 | 42 | — | 0 | 2 | + | 0 | 13 |
| 5 | 7 | 32 | 26 | 58 | 20 | 11 | 31 | 26 | 26 | 57 | 45 | 11 | 33 | 34 | — | 0 | 35 | + | 2 | 8 |
| 8 | 7 | 16 | ♎ 29 | 56 | 0 | 9 | 25 | 31 | ♎ 29 | 54 | 40 | 9 | 26 | 26 | — | 1 | 20 | + | 0 | 55 |
| 9 | 7 | 26 | ♏ 0 | 41 | 36 | 8 | 49 | 2 | ♏ 0 | 39 | 39 | 8 | 49 | 0 | — | 1 | 57 | — | 0 | 2 |

Neither did I think it at all neceſſary to beſtow any more trouble on the conſideration of the Orbit of this Comet, ſince the differences we find are not wholly to be attributed to the errors of our numbers, but partly to the Obſervations themſelves, partly to the ſuppoſed places of the fixed Stars which are not abſolutely perfect, more eſpecially on account of the different refractions of the air near the Horizon, by which the Comet was affected all the time of its appearing, it being ſeldom ſeen above 12 degrees high. Beſides theſe differences are not at all greater than what we uſually find in the Theory of the primary Planets, cultivated by the Aſtronomers for ſo many ages. I wiſh we could reduce the motions of *Jupiter* and *Saturn* within as narrow limits.

Now having eſtabliſhed therefore this Orbit, let us examine the path of the Comet which *Kepler* and *Longomontanus* ſay they obſerved in the year 1607; they were certainly great Aſtronomers, but their deſcription is too lax, and not ſufficiently adapted to our examination. Their Obſervations, ſuch as they have left us, you have as follows.

In the year 1607, *Sept.* 16, Old Stile, *Kepler* being at *Prague* ſaw this Comet the firſt time about nine o'clock, or eight at *London*, under the great Bear, and as well as he could judge by its ſituation in reſpect to ſome remote fixed Stars, its place was in *Leo* 18°. 30′, with 35° $\frac{1}{2}$ North Latitude. At three the next morning, its diſtance from the hinder knee of the Bear (ψ by *Bayer*) was a little leſs than the diſtance of the two in the nearer foot (λ & μ of the Bear), and by the eye in a track nearly parallel, as it were to a line drawn from the Bear's knee to the ſingle Star in the neck (υ of *Bayer*). Then correcting the places of the Stars (which, I know not by what chance, are very erroneouſly deſcribed in *Tycho*'s Table), the place of the Comet was in *Leo* 21°. 49′. Lat. 36°. 12′ N. when the equated time at *London* was 13ʰ. 51ᵐ.

*September* 18ᵈ. 8ʰ. 30ᵐ at *Prague*, and 7ʰ. 20ᵐ equated time at *London*. The Comet was ſeen to be below the little unformed Star near the *great unformed Star between the tails of the Bear and the Lion*, which then was in 12°. 18′ of *Virgo* with 40°. 33′ $\frac{1}{4}$ Lat. from whence it was diſtant by a Diameter of the Moon, in a right line running thro' the laſt in the Bear's tail, and thro' the hand of *Bootes*. Theſe Obſervations place the Comet in ♍ 12°. 2′, with a Latitude of 40°; ſince a diſtance as eſtimated by the eye equal to the Moon's Diameter, muſt be at leaſt 40 minutes.

At *Copenhagen*, *Sept.* 21ᵈ. 7ʰ. 30ᵐ, that is at 6ʰ. 30ᵐ equated time at *London*, *Longomontanus*, by a Sextant of five Cubits Radius, as he ſays, found the Comet to be 30°. 59′ diſtant from the middle of the great Bear's tail, and about the ſame time 16°. 45′ from the bright Star in the *Crown*, by repeated Obſervations. Hence, the places of the fixed Star being adjuſted by the *Britiſh Catalogue*, the Longitude of the Comet comes to be ♎ 16°. 48′, and its Latitude 37°. 12′ North. About the ſame time *Kepler*, in company with a young Pupil, obſerved the Comet to be 6°. 5′ diſtance from *Arcturus*, in a right line running from *Arcturus* to the preceding ſhoulder of *Bootes* (γ by *Bayer*). Whence the place of the Comet was at leaſt in 17°. 0′ of *Libra*.

*September* 25. An hour after Sun ſet, that is, at *Prague* $6^h$. $48^m$ at *London* $5^h$. $36^m$ equated time. The Comet was ſeen a little higher in a right line drawn from *Arcturus* to the bright Star in the *Serpent*'s neck ($\alpha$) diſtant from it 4°. 30′. But two hours after Sun ſet, or $7^h$. $37^m$ at *Prague*, it plainly appeared to be above a line drawn from the bottom of the *Serpent*'s neck ($\delta$) to that in the ſtretching out of its neck ($\beta$). The firſt Obſervation places the Comet ♏ 12°. 0′; but the other at the ſecond hour, about 12°. 30′ in *Scorpio*.

*September* 27. The Comet came into a right line drawn from the ſecond Star in the neck of the *Serpent* ($\delta$) to the bright Star in the neck, ſtanding under that Star ($\varepsilon$) which follows the bright one, at the diſtance of the Moon's Diameter or a little more; and a right line drawn from the Comet thro' that Star in its neighbourhood, fell in the middle between the bright Star in the *Crown* and the ſhoulder of *Hercules* ($\beta$). Which denotes that the Comet was in ♏ 18°. 50′ with 23°. 20′ North Lat. *Kepler* mentions not the hour, but it ſeems that the Obſervation was not made ſoon in the night, becauſe he ſaw the leſſer Stars. Suppoſe it to be at $6^h$. $30^m$ at *London* equated time.

*October* $1^d$. $6^h\frac{1}{2}$. At *Malmoge*, in *Scania*, *Longomontanus* ſaw the Comet at a little leſs than half a degree diſtant from the northern hand of *Serpentarius*; and it was then in a right line with *Arcturus* and the ſoutherly Star in the ſame hand: About the ſame time, *Kepler* ſays, it was a little lower than the right line joining the two Stars of the hand, and diſtant from the neareſt of them about a third part of their diſtance. Both theſe Obſervers, I know not how it happened, are wrong in their deducing the place of the Comet from their own Obſervations; one of them makes it to be in ♏ 25°. 51′, with 17°. 35′ Latitude; the other in ♏ 26°. 30′ with 17°. 40′ Latitude; a great difference, tho' they both nearly agree in the eſtimate they give us of the diſtance and ſituation of the Comet. If, inſtead of the Diameter of the Moon, we put 40′ (as it commonly ſeems to be by a naked eye), and ſuppoſe the Comet in a right line with the Stars of the hand, it would be 23′ more northerly than the neareſt, and 34 min. more weſterly; that is in ♏ 26°. 16′ with 17°. 40′ North Latitude. But by the conſent of both of them it was ſenſibly before this right line, and therefore nearly in ♏ 26°. 0′; which accurately enough brings the Comet into a right line joining *Arcturus* and the Star in the *Southern hand*, as it was obſerved by *Longomontanus*.

*October* 2. Both theſe Obſervers in the foregoing places denoted the Comet's place in reſpect to the aforeſaid Stars in *the hand*. *Longomontanus* at a quarter paſt ſix ſaw it in the Vertex of an obtuſe Iſoſceles Triangle with the ſaid Stars, yet it rather inclined to the North of them. But it was in a right line, as it appeared by a ſtretched thread, with the laſt but one on the ſide of the *Crown* ($\varepsilon$) and the northern one in the hand; alſo in another right line with the ſouthern one in the hand, and the loweſt one in the head of *Scorpio* (i ſuſpect *Capricorn*). *Kepler* about the ſame time (for he mentions not the hour) ſaw the Comet in the middle between the two Stars of the hand, but below a right line joining them, and a little higher than a right line drawn from the loweſt of them to the next bend

bend of the *Serpent* ($\mu$ of the *Serpent* by *Bayer*). All things conſidered, the place of the Comet was in ♏ 27°. 5′, with 16°. 40′ North Latitude, and $5^h$. $12^m$ equated time at *London*.

*October* $5^d$. $8^h$. $30^m$. At *Prague*, *Kepler* with a ſmall inſtrument formerly *Tycho*'s, obſerved the diſtance of the Comet from the knee of *Ophiucus* ($\eta$) to be 14°. 14′, and from the preceding ſhoulder of *Hercules* ($\beta$) 28°. 56′. Hence the Comet was in ♏ 29°. 47′, with 14°. $2'\frac{1}{3}$ North Latitude.

*October* $6^d$. At the ſame hour it was diſtant from the knee of *Ophiucus* 13°. 22′ and from the ſhoulder of *Hercules* 29°. 27′. Whence its Longitude was ♐ 0°. $33'\frac{1}{2}$, and its Latitude 13°. $36'\frac{1}{5}$.

*October* $9^d$. $8^h$. Theſe diſtances were 11°. 22′; and 31°. 19′; and therefore the place of the Comet was in ♐ 2°. 1′ with 11°. 56′ North Latitude.

*October* $12^d$. $6^h$. $31^m$. At *Copenhagen*, by the agreement of both Obſervers, the place of the Comet was in ♐ 1°. 50′, and 9°. 45′ North Lat. But as this was concluded by the extenſion of threads over remote Stars only, which method of Obſervation is hardly to be depended on in ſmall diſtances, I would not from hence determine that the apparent motion of the Comet was already become retrograde.

*October* $16^d$. $6^h$. $15^m$. At *Prague*, *Kepler* ſaw this Comet for the laſt time, and that only now and then between the Clouds: It was, ſays he, very low in a vertical Circle which was about the Semidiameter of the Moon more weſterly than the ſame knee ($\zeta$) of *Ophiucus*, and nearly four times as much below the knee, but certainly more than three times, as the diſtance of the two Stars in the hand ſeem to be aſunder. Concerning this Obſervation ſee *Longomontanus*, where he blames *Kepler* for want of due care, in depreſſing the Comet to $6\frac{1}{2}°$ of Latitude, whereas from the ſaid ſituation of it he computes that it could have no leſs Longitude than ♐ 2°. 10′, nor leſs Latitude than 8°.

Theſe Obſervations I have taken from a little book of *Kepler*'s on Comets, publiſhed in the year 1619 at *Augſburg*; and from an Appendix of *Daniſh* Aſtronomy by *Longomontanus*; and (tho' I wiſh theſe Obſervations had been made with more accuracy, eſpecially towards the end of its appearance) they indeed do indifferently point out the path of this Comet; however they ſufficiently prove that it was one and the ſame Comet with that of the year 1682, by the very ſame argument that we are aſſured that *Mars*, after he has been for ſome time hid under the rays of the Sun, is the ſame Planet as before.

For both Comets were retrograde, and the ſame kind of Orbit is common to both, and the motion of their Nodes and Perihelions is found ſcarcely to differ more than the Orbits of the ſuperior Planets are found to do after the like number of years. But as between the years 1531 and 1607 there are 76 years, I have made the Semiaxis a little greater, *viz.* ſo that it is to the mean diſtance of the Sun as $\overline{76}^{\frac{2}{3}}$, or as 17,9422 to 1; and I have increaſed its perihelion diſtance proportionally, Obſervations requiring the ſame, ſo that it may be 0,58507, the Logarithm of which is 9,767270. Now it had its aſcending Node

Node in ♉ 17. 48′. 40″, with the inclination of its Plane to the Ecliptic 17°. 20′; but its Perihelion in ♒ 1°. 3′. 40″; and the equated time of its Perihelion *October* 16ᵈ. 21ʰ. 44ᵐ at *London*. Alſo its mean diurnal motion is made the ſeventy ſixth part of the Sun's diurnal motion, or 0,000226344, the Logarithm whereof is 6,354769.

Theſe Elements laid down, I have, by the very ſame method of calculation as in the former, compared the Obſervations made on this Comet, ſuch as they are, with the numbers of my Table; and tho' too great a diverſity may be found in ſome of the latter, yet the candid Reader will readily perceive that it is chiefly owing to the diſagreement of the Obſervations among themſelves.

| MDCVII. *Equat. Time.* | | | *Com. Long. Obſerv.* | | | *Lat. North Obſervat.* | | | *Com. Long. Comput.* | | | *Lat. North Comput.* | | | *Differ. Long.* | | *Differ. Latit.* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | h | m | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | | ′ | ″ | | ′ | ″ |
| *Sept.* 16 | 13 | 51 | ♌ 21 | 49 | 0 | 36 | 12 | 0 | ♌ 21 | 55 | 56 | 36 | 20 | 4 | + | 6 | 56 | + | 8 | 4 |
| 18 | 7 | 20 | ♍ 12 | 2 | 0 | 40 | 0 | 0 | ♍ 12 | 3 | 15 | 39 | 50 | 0 | + | 1 | 15 | — | 10 | 0 |
| 21 | 6 | 30 | ♎ 16 | 48 | 0 | 37 | 12 | 0 | ♎ 16 | 45 | 13 | 37 | 11 | 2 | — | 2 | 47 | — | 0 | 58 |
| 25 | 5 | 36 | ♏ 12 | 12 | 0 | | | | ♏ 12 | 8 | 47 | | | | — | 3 | 13 | | | |
| 27 | 6 | 30 | 18 | 50 | 0 | 23 | 20 | 0 | 18 | 44 | 40 | 23 | 16 | 0 | — | 5 | 20 | — | 4 | 0 |
| *Oct.* 1 | 5 | 25 | 26 | 0 | 0 | 17 | 40 | 0 | 25 | 58 | 40 | 17 | 45 | 46 | — | 1 | 20 | + | 5 | 46 |
| 2 | 5 | 12 | 27 | 5 | 0 | 16 | 40 | 0 | 27 | 7 | 12 | 16 | 44 | 0 | + | 2 | 12 | + | 4 | 0 |
| 5 | 7 | 15 | ♏ 29 | 47 | 0 | 14 | 2 | 20 | ♏ 29 | 39 | 25 | 14 | 5 | 35 | — | 7 | 35 | + | 3 | 15 |
| 6 | 7 | 15 | ♐ 0 | 33 | 30 | 13 | 36 | 20 | ♐ 0 | 14 | 0 | 13 | 22 | 55 | — | 19 | 30 | — | 13 | 35 |
| 9 | 6 | 45 | 2 | 0 | 50 | 11 | 56 | 0 | 1 | 25 | 7 | 11 | 33 | 48 | — | 34 | 43 | — | 22 | 12 |
| 12 | 5 | 25 | 1 | 50 | 0 | 9 | 45 | 0 | 2 | 1 | 17 | 10 | 4 | 36 | + | 11 | 17 | + | 19 | 36 |
| 16 | 5 | 0 | ♐ 2 | 10 | 0 | 8 | 0 | 0 | ♐ 2 | 14 | 32 | 8 | 24 | 10 | + | 4 | 32 | + | 24 | 10 |

Here it falls in our way to obſerve by the bye, that the Nodes of this Comet preceded the Nodes of the Comet of 1682 three degrees, their motion being progreſſive according to the order of the Signs; whilſt its Perihelion advanced only 32′. 20″. But in this ſpace of years the præceſſion of the Æquinoxes is 1°. 2′. 30″; therefore in reſpect of the fixed Stars, the Aphelion went backward half a degree, the Nodes in the mean time going forward 1°. 57′. Whereas in the Planets the Aphelia go forward and the Nodes go backward, becauſe of the centripetal forces of the heavenly bodies, manifeſtly mixing themſelves with the forces of the Sun, and diſturbing them, which otherwiſe would be found to be moſt accurately as the ſquare Root of their diſtances from his Centre; from whence all bodies revolving round that Centre, in quieſcent and immoveable Planes, would deſcribe elliptic Orbits always returning into themſelves. By Prop. 14. Book III. of the Principia. But this Comet is retrograde, whence by the ſame cauſes its Aphelion muſt go backwards and its Node forwards in an immoveable Heaven, by the ſame cauſes I ſay, which make the Nodes of the Planets go backward and their Aphelia forward.

Perhaps ſome may object the diverſity of their inclinations and periods, which is greater than what is obſerved in the revolutions of the ſame Planet; ſeeing one period exceeded the other by more than the ſpace of one year, and the inclination of the Comet of the year 1682 exceeded that of the year 1607 by twenty two intire minutes. But let it be conſidered what I mentioned at the end of the Tables of *Saturn*, where it was proved that one period of that Planet is ſometimes longer than another by thirteen days; and that is evidently occaſioned by the force of gravity tending towards the Center of *Jupiter*, which force indeed in equal diſtances is only the thouſandth part of that force tending to the Sun itſelf, by which the Planets are retained in their Orbits. But by a more accurate computation, the force of *Jupiter* towards *Saturn*, for example, in the great conjunction as they call it, *January* 26 in the year 1683, was found to be to the force of the Sun upon the ſame *Saturn*, as 1 to 186; the ſum of the forces therefore is to the force of the Sun, as 187 to 186. But at the ſame diſtance from the Center, the periodic Times of Bodies revolving in a Circle are in the ſubduplicate Ratio of the forces with which they are urged: Wherefore the gravity being increaſed by the 186$^{th}$ part of itſelf, the periodic Time will be ſhortened by about the 374$^{th}$ part, that is by a whole month in *Saturn*. How much more is a Comet liable to theſe errors, which makes its excurſion near four times higher than *Saturn*; and whoſe velocity being increaſed by leſs than the 120th part of itſelf, would change its elliptic Orbit into a parabolic Trajectory.

But it happened in the ſummer of the year 1681, that the Comet ſeen in the following year, in its deſcent towards the Sun, was in conjunction with *Jupiter* in ſuch a manner, and for ſeveral months ſo near him, that during all that time it muſt have been urged likewiſe towards the Center of *Jupiter* with near the 50$^{th}$ part of that force by which it tended towards the Sun: Whence, according to the theory of gravity, the Arc of the elliptic Orbit, which it would have deſcribed had *Jupiter* been abſent, muſt be bent inwards towards *Jupiter* in an hyperboliform winding, and have aſſumed a kind of Curve very compounded and as hitherto not to be managed by the Geometers; in which the velocity and direction of the moving Body, in proportion to the cauſe, would be very different from what it otherwiſe had in the Ellipſis.

Hence a reaſon may be aſſigned for the change of its inclination: For as the Comet in this part of its path had *Jupiter* on the North almoſt in a perpendicular direction to its path, that portion of its Orbit muſt be bent towards that quarter; and therefore its Tangent being inclined in a greater Angle towards the Plane of the Ecliptic, the Angle of the inclination of the Plane itſelf muſt be neceſſarily increaſed. Beſides the Comet continuing long in the neighbourhood of *Jupiter*, after it had come towards him from parts much more remote from the Sun with a ſlower motion, and now being urged with the joint central forces of both, muſt have acquired more accelerated velocity, than it could loſe in its receſs from *Jupiter*, by forces acting a contrary way, its motion being more ſwift, and the time being leſs: Whence the proper velocity of the Comet being

being increaſed by this exceſs, it is probable that its return will not be untill after the period of 76 years or more, about the end of the year 1758, or the beginning of the next. But having touched upon theſe things, I ſhall leave them to be diſcuſſed by the care of poſterity, after the truth is found out by the event.

That the Comet of the year 1531, obſerved by *Apian*, was the ſame with this now deſcribed, appears from its period, its retrograde motion between the Sun and the Earth, the ſituation of the Perihelion and Nodes, and its inclination, none whereof differ much from the former: Notwithſtanding if any one would undertake accurately to define all of theſe, he would labour in vain, becauſe the Obſervations are ſo very imperfect, being taken with a ſmall inſtrument for Azimuths in a groſs manner, and were only deſigned to ſhew the aſcent of the Comet's tail towards the parts oppoſite to the Sun.

Yet leſt any one ſhould complain that any thing relating to this affair is omitted by us, I have conſulted *Apian*'s book called *Aſtronomicon Cæſareum*, dedicated to the Emperor *Charles* V. after with difficulty I had found it; and I have made the following extract from it, no where elſe publiſhed.

In the year 1531, at *Ingolſtadt* on the *Danube* (in the Latitude 48°. 40′. and Longitude 11°$\frac{1}{2}$, or 46 min. of time to the Eaſt of *London*), *Aug.* 13 in the evening *Apian* firſt ſaw the Comet to the North Weſt: And the bright Star *Arcturus* being full Weſt, or in the prime Vertical, as they ſay, the Comet was 7°. 56′ high, and 49°. 26′ from the Weſt northerly. On the next night, *Aug.* 14, after one revolution of the Heavens, the Comet was 8°. 29′ high, being now 45°. 22′ northwards. *Aug.* 15, in the ſame ſituation of the Heavens, the Comet was 9° high, and 41°. 22′ northerly. *Aug.* 16, it was 9°. 43′ high, and only 35°. 13′ northerly. *Aug.* 17, it was in the Azimuth of 30°. 46′ from the Weſt and 10°. 14′ high. *Aug.* 18, it was 10°. 39′ high, and 24°. 42′ from the Weſt. Afterwards it was for three nights under clouds; and *Aug.* 22, in the ſame ſituation of the ſtarry ſphere, the Comet was 11°. 25′ high, and 7°. 34′ from the Weſt northerly. Laſtly, *Aug.* 23, *Arcturus* being Weſt, the Comet was more northerly only 3°. 50′, and 11°. 25′ high.

But the Obſerver ſuppoſes, according to the Aſtronomy of his own age, that *Arcturus* was then in ♎ 16°. 59′, with 31°. 30′ North Latitude erroneouſly, inſtead of ♎ 17°. 41′, and Latitude 30°. 57′, as is evident from more certain Obſervations. This being ſubſtituted for the other, the right aſcenſion of the Mid-heaven when *Arcturus* was in the Weſt at *Ingolſtadt* will be 278°. 10′. Hence the Altitudes, due allowances being made for the Refractions, by a calculation more accurate than needs, the places of the Comet will come out as follows.

| MDXXXI. Igoldſt. App.time | | | Comet's Rt. Aſcen. | | | Comet's Decl. Nor. | | | Comet's Long. by Obſervat. | | | Lat. Nortl. Obſervat. | | | Longit. Apian. | | Lat.N. by Apian | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | h | m | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ° | ′ |
| *Aug.* 13 | 8 | 26 | 151 | 45 | 45 | 36 | 49 | 25 | ♌ 20 | 16 | 0 | 23 | 30 | 10 | ♌ 19 | 15 | 23 | 15 |
| 14 | 8 | 22 | 156 | 17 | 20 | 35 | 3 | 50 | 24 | 41 | 30 | 23 | 18 | 45 | 23 | 39 | 23 | 2 |
| 15 | 8 | 19 | 160 | 32 | 50 | 33 | 11 | 50 | ♌ 29 | 1 | 0 | 23 | 1 | 30 | 24 | 29 | 22 | 0 |
| 16 | 8 | 15 | 166 | 43 | 20 | 30 | 4 | 30 | ♍ 5 | 36 | 15 | 22 | 21 | 40 | ♍ 4 | 32 | 22 | 1 |
| 17 | 8 | 11 | 170 | 58 | 40 | 27 | 42 | 25 | 10 | 19 | 40 | 21 | 47 | 0 | 9 | 14 | 21 | 25 |
| 18 | 8 | 7 | 176 | 19 | 30 | 24 | 8 | 50 | ♍ 16 | 37 | 0 | 20 | 36 | 15 | ♍ 15 | 30 | 20 | 12 |
| 22 | 7 | 54 | 190 | 6 | 30 | 13 | 27 | 10 | ♎ 3 | 49 | 0 | 16 | 20 | 40 | ♎ 1 | 23 | 16 | 32 |
| 23 | 7 | 50 | 192 | 53 | 30 | 11 | 1 | 20 | ♎ 7 | 25 | 30 | 15 | 13 | 40 | 2 | 51 | 14 | 31 |

If we compare theſe places one with another, we ſhall ſoon ſee that the diſagreement is very great, without doubt owing to the badneſs of the inſtrument with which they were taken. But in deducing the places from the third and two laſt Obſervations, a very grievous error is committed by *Apian* himſelf. However altho' nothing of certainty or accuracy can be drawn from ſuch uncertain data, yet they are very ſufficient to ſhew that this Comet had its path extremely like that of 1682, and if we add three degrees to its Latitude, almoſt the ſame.

It would be to no purpoſe to compare our numbers with theſe; ſince it is utterly impoſſible that by any regular computation things ſhould be reconciled that are ſo irregular and repugnant among themſelves. But if the periodic Time be made to conſiſt of 75 years, and ſo the greater Semiaxis of the Ellipſis be 17,7845; the perihelion diſtance will be 0,57993; the aſcending Node in ♉ 15°. 30′; the inclination 17°. 00′, and the Perihelion in ♒ 1°. 12′. But the time of the Perihelion, in the year 1531, was *Auguſt* 25$^{d}$. 19$^{h}$. 00$^{m}$; and the mean diurnal motion the ſeventy fifth part of the Sun's diurnal motion, or 0,000229362 whoſe Log. is 6,360522; we may, by means of the ſaid Table, compute the motion of this Comet, and we ſhall for the moſt part find them more agreeable to the Obſervations, than the Obſervations are among themſelves.

You ſee therefore an agreement of all the Elements in theſe three, which would be next to a miracle if they were three different Comets; or if it was not the approach of the ſame Comet towards the Sun and Earth, in three different revolutions in an Ellipſis around them. Wherefore if according to what we have already ſaid it ſhould return again about the year 1758, candid poſterity will not refuſe to acknowledge that this was firſt diſcovered by an *Engliſhman*.

And this Comet is as it were the *Mercury* of the Comets, ſurrounding the Sun with a leſſer Orbit, and ſhorter periodic Time, while all the reſt expatiate more widely, and after very long and more than ſecular revolutions, nay of many ages duration, offer themſelves to the ſight of Men for but a little ſpace of time, to wit, only while being in the neighbourhood of the Sun, they ſhine with

with a ſtronger light, and exhibit ſenſible tails, which is nothing but very rarified vapours raiſed from the matter of the Comet agitated by the force of heat, and thrown upwards with great velocity into the Æther which is almoſt a vacuum. But concerning this phyſical affair, hear what the moſt celebrated *NEWTON* ſays, in his demonſtrative manner, towards the end of the third book of the *Principia*.

Hence it comes to paſs, that we have not the ſame evidence that any other Comets have returned, as we have in this of ours of the year 1682. But if any argument may be drawn from the equality of periods, and from ſimilar phenomena, that wonderful Comet which appeared in the year 1680, was one and the ſame with that of 1106, when *Henry* I. was King of *England*, it firſt emerged out of the Sun's rays " on *Friday*, *February* 16, in the evening, and was ſeen for a long " time afterwards every evening. The Star, which ſeemed little and obſcure, ap- " peared in the South-eaſt. But the Ray which proceeded from it was very clear " and large, ſhining towards the North-eaſt," as we have it recorded in the *Saxon* Chronicle by one who ſeems to have been an eye-witneſs. Now this deſcription agrees very well with that of the Comet of the year 1680, both in reſpect to the length of its tail, and alſo its ſituation in regard to the Sun.

Alſo in the conſulate of *Lampadius* and *Oreſtes* in the year of *Chriſt* 531, when *Juſtinian* was Emperor, another Comet, like this, appeared in the evening, of which *Malela*, the Author of the *Antiochian* Chronicle, perhaps an eye-witneſs alſo, writes thus, " A great and fearful Star appeared in the Weſt, emitting a white beam " upwards, which as it appeared like the flaſhes of lightning, ſome called it *Lampadian:* " It was ſeen for twenty days." I could have wiſhed indeed the Hiſtorian had told us the time of the year this happened. However it is manifeſt that the interval of years between this and that ſeen in the year 1106, is nearly equal to that between the years 1106 and 1681, that is to ſay about 575 years.

And if we reckon backward ſuch another period, we ſhall come to the forty fourth year before *Chriſt*, when, ſoon after the death of *Julius Cæſar*, a very remarkable Comet appeared, mentioned by almoſt all the Hiſtorians of thoſe times, and by *Pliny* in his *Natural Hiſtory*, *Lib.* II. *c.* 24, where we have the words of *Auguſtus Cæſar* himſelf concerning it: By means whereof we are led to the very time and ſituation of this phenomenon in the Heavens; wherefore it will not be amiſs to recite them. " In the very days of my games, a hairy Star " (*Sydus crinitum*) was ſeen for ſeven days, in that part of the Heavens which " is under the Septentriones, it aroſe about the eleventh hour of the day, and " was clearly to be ſeen all over the World." Now *Auguſtus* dedicated theſe his games to *Venus genitrix* (for the *Cæſars* boaſted that they deſcended from the Goddeſs *Venus*), and they began on his birth-day, that is on the 23d of *September*, and continued for ſeven days, as we may learn from a fragment of an old *Roman* Calendar in p. 135, of *Gruter*, the new edition. Now *Cæſar* ſays

ſays the Comet was ſeen all theſe ſeven days, but that does not imply that it was not ſeen before and after thoſe days. And when he ſays the Comet was ſeen under the *Septentriones*, he is not to be underſtood that it was ſeen in the North under the Pole, but under the *ſeptem Triones*, that is below the bright Stars of the *Great Bear*. And that it could be riſen at the eleventh hour of the day can by no means be conceived; wherefore inſtead of the word day it ſhould be read night, or that word ſhould be omitted as it is in *Suetonius*: For the Sun being then near the autumnal Equinox, the eleventh hour at *Rome*, at which the Comet is ſaid to riſe, begun at four in the morning according to our reckoning; ſo that it was judged to riſe between four and five o'clock, or about an hour and half before Sun riſe: So that it preceded the Sun about twenty degrees, which muſt be underſtood about the firſt beginning of its appearance, or at leaſt of the ſeven days mentioned. But at the time it ſhone under *Charles*'s *Wain*, it roſe much ſooner, and had a conſiderable northern Latitude, by its retrograde motion from the Sign *Virgo* to the ſide of *Cancer*; that is, having travelled thro' the intermediate ſpace between *Leo* and the *Bear*.

Now if we reſume the ſituation of the Comet's Orbit of the year 1680, in reſpect of the fixed Stars, and ſuppoſe its Perihelion for the forty fourth year before *Chriſt*, to be about the 18th day of *September*; a computation being any how made, it will preſently appear, that the courſe of the Comet in its aſcent from the Sun, where it projected its tail, and *was a bright Star and conſpicuous all over the World*, ſufficiently agrees with the courſe of this deſcribed by *Auguſtus Cæſar*. It is not therefore unwarrantable to believe that this Comet ſeen by *Cæſar*, having finiſhed three revolutions, again appeared in the year 1680; eſpecially when the like Comets have appeared at equal intervals, *viz.* in the year of *Chriſt* 531 and 1106.

Let us ſuppoſe then that its period is about 575 years. Therefore half the greater Axis of the Ellipſis will be $\overline{575}^{\frac{2}{3}}$, or 69,14785 of ſuch parts as the mean diſtance of the Earth from the Sun is unity. But the perihelion diſtance in ſuch parts will be 0,006175, very agreeable to what we find it to be by Obſervations, and therefore the conjugate Semiaxis of the Orbit will be 0,92410; or ſuppoſing the greater Semiaxis $= 1$, the perihelion diſtance will be 0,00008930 1 whoſe Logarithm is 5,950858, and its leſſer Semiaxis 0,0133641 whoſe Logarithm is 8,125939: Theſe foundations being laid, I have made the following Table, of the ſame form almoſt with the preceding: But as this Comet, on account of its vicinity to the Sun, could not be ſeen until the fourth day after the Perihelion, the Table begins at the fifth degree of the excentric Anomaly: Alſo the Angles are reckoned from the Aphelion, and the Logarithms are thoſe of the Ratio's of the true diſtances of the Comet from the Sun, to the mean diſtance of the Sun from the Earth. Moreover I have computed in Decimals of a degree in the former part, that there might not be occaſion for ſecond differences in the interpolation.

Then follows the Table.

As to the position of the far extended Plane of this elliptic Orbit, I retain the same Nodes as in the parabolic Trajectory above described, namely 2°. 2′ of *Capricorn* and *Cancer*, with the inclination of 61°. 6′. 48″ to the Plane of the Ecliptic. But the Perihelion of the Comet, which moves in this Plane according to the order of the Signs, falls in ♐ 22°. 44′. 25″, and therefore the Aphelion is in ♊ 22°. 44′. 25″, or 9°. 17′. 35″ before the descending Node: I make the equated time of the Perihelion to be *December* 7ᵈ. 23ʰ. 9ᵐ at *London*; *viz.* in the year 1680. As to its mean diurnal motion it becomes $\frac{1}{575}$ of the Sun's diurnal motion, that is 0,000029167 whose Logarithm is 5,475914, to which if there be added the Logarithm of the time before or after the Perihelion, we shall soon have the mean motion for any given moment.

Perhaps it may not be amiss to annex an example of this calculation. In the year 1680, *November* 3, 16ʰ. 47ᵐ equated time reduced to the Meridian of *London*, *Gottfried Kirch*, at *Coburg* in *Saxony*, observed the Comet in its descent towards the Sun, when it was as yet destitute of any tail, and as a little white cloud without a Nucleus, scarce to be discerned by the naked eye, namely when as fortune would have it, he was viewing thro' a Telescope the Moon and Stars which were near it. He described accurately enough the situation of this phenomenon among the neighbouring small fixed Stars: Whence, the curious industry of the Reverend Mr. *Pound* also helping me, I obtained its place in respect to the Ecliptic sufficiently accurate, which was in ♌ 29°. 51′, with 1°. 18′ North Latitude. But concerning this Observation see the Philosoph. Transact. N° 342.

Now this Observation preceded the time of the Perihelion 34ᵈ. 6ʰ. 22′, or in decimals of a day 34,2653. Let the Logarithm of this 1,534854 be added to the Logarithm of the mean diurnal motion for the given time 7,010768, and we have 0,001025105. I find in the Table this mean motion between 10°. 24′ and 10°. 36′ of the excentric Anomaly, and by due interpolation the Angle after the Perihelion comes to be 8°. 21′. 37″, and the Logarithm of the Comet's true distance from the Sun is 0,061658. To the place of the Aphelion ♊ 22°. 44′. 25″, add 8°. 21′. 37″, and we shall have the place of the Comet in its own Orbit in ♋ 1°. 6′. 2″, that is, 0°. 55′. 58″ before the descending Node: Hence its heliocentric place reduced to the Ecliptic will be in ♋ 1°. 34′. 58″. with 0°. 49′. 0″ North Latitude: And the Logarithm of the curtate distance 0,061614. Now the Sun was at that time in ♏ 22°. 44′. 50″, and the Logarithm of his distance from the Earth 9,994672. From which data, if a trigonometrical computation be made in the manner as usual in the Planets, the geocentric place of the Comet will be in ♌ 29°. 51′. 22″, with 1°. 17′. 32″ of North Latitude, just as it was observed.

Indeed this Observation of *Kerch* is a very noble one, not only that it is prior by 13 days to the Observations of all others, but as it is the sole and only one of many, published by foreigners on the Comet as seen in the morning, to which we may give full belief. How much the sagacity of *Newton*

*Newton* was exercised in polishing them and comparing them one to another, may be seen in the third book of his *Principia*. Which nevertheless every where are commonly so inconsistent one with another, as not taken with due care or proper instruments, that we judge them unworthy of further notice here; as those Observations, in our opinion, should be tried by the calculation, and not the calculation by them.

But the following Table exhibits a most exact series of the motions of the Comet as seen in the evenings, in a great measure deduced from the Observations made with the aforesaid Sextant at *Greenwich*, and verified as far as could be by it, according to the reformed places of the fixed Stars in the *British Catalogue*. The last two only are *Newton*'s, who very artfully estimated the motion of the vanishing Comet by the Stars in the *foot of Perseus*. And a calculation being accurately made according to the premised Elements, produced a congruity abundantly sufficient to satisfy the most scrupulous Calculator.

| MDCLXXX. *Equat. Time.* | | | *Com. Long. Observ.* | | | *Lat. North Observat.* | | | *Com. Long. Comput.* | | | *Lat. North Comput.* | | | *Differ. Long.* | | | *Differ. Lat it.* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | h | m | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | | ′ | ″ | | ′ | ″ |
| *Nov.* 3 | 16 | 47 | ♌ 29 | 51 | 0 | 1 | 18 | 0 | ♌ 29 | 51 | 22 | 1 | 17 | 32 | + | 0 | 22 | − | 0 | 28 |
| *Dec.* 12 | 4 | 46 | ♑ 6 | 32 | 30 | 8 | 28 | 0 | ♑ 6 | 31 | 20 | 8 | 29 | 6 | − | 1 | 10 | + | 1 | 6 |
| 21 | 6 | 37 | ♒ 5 | 8 | 12 | 21 | 42 | 13 | ♒ 5 | 6 | 14 | 21 | 44 | 42 | − | 1 | 51 | + | 2 | 29 |
| 24 | 6 | 18 | 18 | 49 | 23 | 25 | 23 | 5 | 18 | 47 | 30 | 25 | 23 | 35 | − | 1 | 53 | + | 0 | 30 |
| 26 | 5 | 21 | ♒ 28 | 24 | 13 | 27 | 0 | 52 | ♒ 28 | 21 | 42 | 27 | 2 | 1 | − | 2 | 31 | + | 1 | 9 |
| 29 | 8 | 3 | ♓ 13 | 10 | 41 | 28 | 9 | 58 | ♓ 13 | 11 | 14 | 28 | 10 | 38 | + | 0 | 33 | + | 0 | 40 |
| 30 | 8 | 10½ | ♓ 17 | 38 | 20 | 28 | 11 | 53 | ♓ 17 | 38 | 27 | 28 | 11 | 37 | + | 0 | 7 | − | 0 | 16 |
| *Jan.* 3 | 7 | 50 | ♈ 2 | 53 | 0 | 27 | 7 | 48 | ♈ 2 | 52 | 42 | 27 | 7 | 48 | − | 0 | 18 | | | |
| 1681. 5 | 6 | 1¼ | 8 | 48 | 53 | 26 | 15 | 7 | 8 | 48 | 51 | 26 | 14 | 57 | − | 0 | 2 | − | 0 | 10 |
| 9 | 7 | 1 | 18 | 44 | 4 | 24 | 11 | 56 | 18 | 43 | 51 | 24 | 12 | 17 | − | 0 | 13 | + | 0 | 21 |
| 10 | 6 | 6 | 20 | 40 | 50 | 23 | 43 | 32 | 20 | 40 | 23 | 23 | 43 | 25 | − | 0 | 27 | − | 0 | 7 |
| 13 | 7 | 9 | ♈ 25 | 59 | 48 | 22 | 17 | 28 | ♈ 26 | 0 | 8 | 22 | 16 | 32 | + | 0 | 20 | − | 0 | 56 |
| 25 | 7 | 59 | ♉ 9 | 35 | 0 | 17 | 56 | 30 | ♉ 9 | 34 | 11 | 17 | 56 | 6 | − | 0 | 49 | − | 0 | 24 |
| 26 | 6 | 50 | 10 | 19 | 0 | 17 | 40 | 30 | 10 | 20 | 14 | 17 | 40 | 29 | + | 1 | 14 | | | |
| *Jan.* 30 | 8 | 22 | 13 | 19 | 51 | 16 | 42 | 18 | 13 | 18 | 28 | 16 | 40 | 5 | − | 1 | 23 | − | 2 | 13 |
| *Feb.* 2 | 6 | 35 | 15 | 13 | 53 | 16 | 4 | 1 | 15 | 11 | 59 | 16 | 2 | 7 | − | 1 | 54 | − | 1 | 54 |
| 5 | 7 | 4¾ | 16 | 59 | 6 | 15 | 27 | 3 | 16 | 59 | 17 | 15 | 27 | 0 | + | 0 | 11 | − | 0 | 3 |
| *Mar.* 1 | 11 | 10 | ♉ 27 | 52 | 40 | 12 | 23 | 40 | ♉ 27 | 51 | 47 | 12 | 22 | 38 | − | 0 | 53 | − | 1 | 2 |
| 9 | 8 | 38 | ♊ 0 | 43 | 4 | 11 | 45 | 52 | ♊ 0 | 42 | 43 | 11 | 45 | 35 | − | 0 | 21 | − | 0 | 17 |

Let now the Patrons of Vortices and an absolute Plenum, try whether according to their Hypotheses, they can delineate the path of this Comet, thro' nine whole Signs and for the space of above four months; and whether any other Curve, or any other law of motion sensibly different from ours, can exhibit with the like certainty the peculiar curvature of its path, and its velocities so very differently increased and diminished. If they cannot do this, let

let them at laſt leave off trifling, give themſelves up to the ſtudy of truth, and ſwear according to the Motto of our *Royal Society*, *Nullius in verba*.

Now this Comet, in that part of its Orbit in which it deſcended towards the Sun, came ſo near the paths of all the Planets, that if by chance it had happened to meet any one of the Planets paſſing by, it muſt have produced very ſenſible effects, and the motion of the Comet would have ſuffered the greateſt diſturbance. In ſuch caſe the plane and ſpecies of its Ellipſis and its periodic Time would have been very much changed, eſpecially from meeting with *Jupiter*. In the late deſcent, the true path of this Comet left the Orbits of *Saturn* and *Jupiter* below itſelf a little towards the South: It approached much nearer to the paths of *Venus* and *Mercury*, and much nearer ſtill to that of *Mars*. But as it was paſſing thro' the plane of the Ecliptic, *viz.* to the ſouthern Node, it came ſo near the path of the *Earth*, that had it come towards the Sun thirty one days later than it did, it had ſcarce left our Globe one Semidiameter of the *Sun* towards the North: And without doubt by its centripetal force (which with the great *Newton* I ſuppoſe proportional to the bulk or quantity of matter in the Comet), it would have produced ſome change in the ſituation and ſpecies of the *Earth*'s Orbit, and in the length of the year. But may the great good GOD avert a ſhock or contact of ſuch great Bodies moving with ſuch forces (which however is manifeſtly by no means impoſſible), leſt this moſt beautiful order of things be intirely deſtroyed and reduced into its antient chaos. But of this by the bye.

Now as it is more than probable that the reſt of the Comets deſcribed in our Catalogue, will return again after having finiſhed their periods, whence their periodic times being given, the Axes, and from thence the ſpecies of their elliptic Orbits will be alſo given; wherefore that I might render the tedioufneſs of the operoſe calculation as eaſy as I could to future Aſtronomers, I have added the following Table, wherein are contained the double Areas of the Segments, the Logarithms of the right and verſed Sines, with their differences, and the verſed Sines themſelves to every fifth part of the degrees of the excentric Anomaly. Now if we make the greater Semiaxis of the Ellipſis to the perihelion diſtance, as unity to a fourth proportional number, and if to the Logarithm of this fourth proportional we add the Logarithms of the right Signs in the Table one by one, or their differences by a continual addition, we ſhall have the double Areas of the Triangles to be added to the double Segments found in the ſecond column, for the mean motions to the excentric Anomalies reſpectively. Afterwards in like manner add the Logarithms of the verſed ſines to the Logarithm of the given Excentricity, and thro' the whole ſeries of numbers anſwering to theſe ſums, let there be added every where the perihelion diſtance, and the reſult will be a Table of the true diſtances of the Comet from the Sun. Finally it will be in every caſe, as the diſtance of the Comet from the Sun, is to the leſſer Axis of the Orbit, ſo is the Sine of the excentric Anomaly, to the Sine of the Angle at the Focus of the Ellipſis.

*F I N I S.*

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*Logarithmi diſtantiarum Solis à Terrâ* — E e 4
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*Revolutiones Lunæ ad Solem in menſibus anni communis* — * * E e
*Motus medii Lunæ à Sole ad horas & minuta horaria* — * * E e 2
*Revolutiones Lunæ ad Solem in Annorum centuriis* — * * E e 3
*Periodi lunares* — * * E e 4
*Epochæ mediorum motuum Lunæ & Apogæi ejus, exiſtente terrâ in Aphelio* — F f & ſeq.
*Epochæ motus Nodi aſcendentis Lunæ, exiſtente terrâ in Aphelio* — F f 3
*Medii motus Lunæ, Apogæi, & Nodi ad gradus Anom med. Solis* — F f 4 & ſeqq.
——— *ad minuta Anom. med. Solis* — H h 2
*Tabula medii motus Lunæ, Apogæi, & Nodi ab Æquinoctio in centuriis annorum anomaliſticorum* — H h 3
*Epochæ mediorum motuum Lunæ & Apogæi ejus Annis Julianis ineuntibus* — H h 4 & ſeq.
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*Medii motus Lunæ, Apogæi, & Nodi ejus ad dies menſium* — I i 3 & ſeqq.
——— *ad horas & minuta horaria* — L l
*Tabula medii motus Lunæ, Apogæi, & Nodi ejus ab Equinoctio in centuriis annorum Julianorum* — L l 2
*Tabula Æquationum annuarum Lunæ, Apogæi, & Nodi* — L l 3 & ſeq.
*Æquationes Lunæ minores* — M m
*Tabula Æquationum Apogæi, Excentricitatum orbis Lunæ, & Logarithmorum pro Æquatione centri* — M m 2 & ſeqq.
*Tabula pro expediendo calculo centri Lunæ* — N n & ſeqq.
*Tabula Variationis ſive Reflectionis Lunæ* — N n 4
*Logarithmi pro correctione Variationis* — ibid.
*Tabula pro computo Latitudinis Lunæ* — O o
*Tabula Parallaxium Lunæ horizontalium in Syzygiis* — O o 2


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*Tabula Æquationum Lunæ in Syzygiis* — Oo 3
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*Tabula motuum horariorum, Diametrorum, & Parallaxium Solis & Lunæ in Eclipsibus* — Oo 5
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*Tabulæ planetæ Jovis* — Aaa & seqq.
*Series oppositionum Solis & Jovis cum computo collata* — Ccc 2 & seq.
*Tabulæ planetæ Saturni* — Ccc 4 & seqq.
*Series oppositionum Solis & Saturni cum computo collata* — Fff 2 & seq.
*Monitum* — Fff 4.

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*Medii motus Satellitum Jovis ad dies mensium* — Bbbb 2 & seqq.
*— — — — — — in annorum centuriis* — Eeee 2
*— — — — — — in horis* — ibid.
*— — — — — — in minutis horariis* — Eeee 3
*Tabula temporis, medio primi Satellitis a Jove motui congruentis* Eeee 4
*Tabula temporis, mediis Satellitum 2di, 3tii & 4ti motibus à Jove, congruentis* — Ffff
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*Æquationes luminis addendæ* — Ffff 4
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*Distantiæ apparentes Satellitum à centro Jovis, in semidiametris Jovis & semidiametri centesimis* — Gggg
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## REGISTRUM.

*. (a) (b) (c) (d) (e) (f) Aa. Bb. Cc. Dd. Ee. *Ee. **Ee. Ff. Gg. Hh. Ii. Kk. Ll. Mm. Nn. Oo. Qq. Rr. Ss. Tt. Uu. Xx. Yy. Zz. Aaa. Bbb. Ccc. Ddd. Eee. Fff. Charta ſine litera. Bbbb. Cccc. Dddd. Eeee. Ffff. Gggg. Hhhh. Hhhh 3. Iiii. Kkkk. Llll. Mmmm. Nnnn. Oooo. Pppp. Qqqq. Rrrr. Ssss. Tttt. Uuuu. Xxxx. A⁎*⁎. B⁎*⁎. C⁎*⁎. ¢ b. ¢ c. ¢ d. ¢ e. ¢ f. ¢ g. ¢ h. ¢ i. ¢ k. ¢ l. ¢ m. ¢ n. ¢ o. ¢ p. ¢ q. ¢ r. Charta ſine litera.

Charta O o ſex paginas continet, cæteræ omnes quatuor.

| Errata. | | | Errores. | | | | Correctiones. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| In Tabulis Mediorum Mot. Lunæ. | | | ☽ | ° | ′ | ″ | ☽ | ° | ′ | ″ |
| Maii 16. | | - | 11 | 21 | 59 | 53 | 11 | 21 | 59 | 23 |
| In Obſervationum Tabulis. | | | | | | | | | | |
| 1723. | Jul. 14. | Lunæ tranſitus - - - | | 19ʰ | 12 | 22 | | 19 | 12 | 30 |
| 1725. | Mar. 11. | Aſcenſio Recta obſ. - - | | 112 | 29 | 57 | | 112 | 29 | 0 |
| | Sept. 5. | Aſcenſ. rect. comp. - - | | 290 | 59 | 40 | | 290 | 57 | 8 |
| | Oct. 11. | Aſcenſ. rect. comp. - - | | 43 | 57 | 48 | | 43 | 53 | 53 |
| | Nov. 2. | Lunæ tranſitus - - - | | 6ʰ | 28 | 8 | | 6 | 38 | 8 |
| | Dec. 2. | Lunæ tranſitus - - - | 2ᵈ | 6 | 0 | 9 | 1ᵈ | 6 | 0 | 9 |
| 1726. | Mar. 30. | Longit. Lunæ comp. - - | ♌ | 7 | 19 | 9 | ♌ | 7 | 15 | 51 |
| | Aug. 20. | Error Computi - - - | | + | 0 | 43 | | — | 0 | 43 |
| 1728. | Apr. 2. | Longit. Lunæ comp. - - | ♊ | 8 | 48 | 44 | ♊ | 8 | 46 | 44 |
| 1730. | Maii 11. | Longit. Lunæ comp. - - | ♌ | 4 | 2 | 18 | ♌ | 3 | 58 | 0 |
| | Dec. 5. | Lunæ tranſitus - - - | | 5 | 57 | 16 | | 5 | 58 | 16 |
| 1731. | Sept. 2. | Longit. Lunæ comp. - - | ♒ | 27 | 47 | 45 | ♒ | 20 | 47 | 45 |
| | 9. | Longit. Lunæ obſ. - - | ♊ | 7 | 11 | 34 | ♊ | 6 | 11 | 34 |
| 1732. | Sept. 21. | Longit. Lunæ obſ. - - | ♓ | 14 | 14 | 18 | ♓ | 24 | 14 | 18 |
| | ——— | comp. - - | ♓ | 14 | 8 | 10 | ♓ | 24 | 8 | 10 |
| | Nov. 15. | Longit. Lunæ comp. - - | ♓ | 25 | 25 | 26 | ♓ | 25 | 22 | 26 |
| 1733. | Jun. 20. | Lunæ tranſitus - - - | | 15 | 21 | 29 | | 15 | 51 | 29 |
| | Jul. 7. | Longit. Lunæ obſ. - - | ♎ | 22 | 41 | 53 | ♎ | 23 | 41 | 53 |
| | Nov. 4. | Error Computi - - - | | + | 0 | 29 | | — | 0 | 29 |
| 1734. | Jan. 31. | Diſtantia ☽ à ☉ - - - | | 8 | 3 | 33 | | 3 | 8 | 33 |
| | Feb. 27. | Longit. Lunæ comp. - - | ♉ | 25 | 50 | 40 | ♉ | 26 | 50 | 40 |
| | Apr. 12. | Lunæ tranſitus - - - | | 16 | 42 | 43 | | 16 | 33 | 43 |
| | Maii 13. | Longit. Lunæ comp. - - | ♒ | 15 | 21 | 59 | ♒ | 25 | 21 | 59 |

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# TABULARUM
# *ASTRONOMICARUM*

PARS PRIOR

# MOTUS SOLIS LUNÆ

ET

# PLANETARUM QUINQUE

EXHIBENS.

*DIFFERENTIÆ TEMPORIS MERIDIANI, ET LONGITUDINES ab Observatorio Grenovicensi; tum etiam Latitudines Urbium & Locorum aliquot insignium.*

| Locorum nomina | *Diff. temp.* | *Longitudines.* | *Latitudines.* |
|---|---|---|---|
| | H. M. S. | ° ′ ″ | ° ′ ″ |
| Alexandria *Ægypti* - - - - | 2 1 6 | 30 16 30 Or | 31 7 0 S |
| Alexandria ad Issum. *Alexandretta.* | 2 25 20 | 36 20 0 Or | 36 35 10 S |
| Aracta. *Racca.* - - - - - - | 2 35 20 | 38 50 0 Or | 36 1 0 S |
| Argentoratum. *Strasburgh* - | 0 31 5 | 7 46 15 Or | 48 34 35 S |
| Athenæ - - - - - - - - | 1 35 30 | 23 52 30 Or | 38 5 0 S |
| Babylon - - - - - - - - | 2 51 6 | 42 46 30 Or | 33 0 0 S |
| Babylon, *Ægypti. Cairo.* - - | 2 5 45 | 31 26 15 Or | 30 2 30 S |
| Bagdad - - - - - - - - | 2 55 6 | 43 46 30 Or | 33 21 0 S |
| Balasora, *apud Ind. orient.* - - | 5 44 0 | 86 0 0 Or | 21 20 0 S |
| Berolinum. - - - - - - - | 0 53 50 | 13 27 30 Or | 52 33 0 S |
| Bonæ spei promontorium - - | 1 8 0 | 17 0 0 Or | 34 15 0 M |
| Bononia - - - - - - - - | 0 46 28 | 11 37 0 Or | 44 30 0 S |
| Buenos Ayres - - - - - - | 3 52 20 | 58 5 0 Occ | 34 35 0 M |
| Byzantium - - - - - - - | 1 55 32 | 28 53 0 Or | 41 0 0 S |
| Carthagena, *Americ.* - - - | 5 0 46 | 75 11 30 Occ | 10 26 0 S |
| Cayenna, *Inf. Americ.* - - - | 3 51 20 | 57 50 0 Occ | 4 56 0 S |
| Eboracum novum - - - - - | 4 56 36 | 74 9 0 Occ | 40 40 0 S |
| Fruenburgum - - - - - - | 1 20 30 | 20 7 30 Or | 54 22 15 S |
| Gades. *Cadiz.* - - - - - - | 0 24 28 | 6 7 0 Occ | 36 33 30 S |
| Gedanum. *Dantzic.* - - - | 1 15 12 | 18 48 0 Or | 54 22 0 S |
| Goa, *apud Ind. orient.* - - - | 4 55 0 | 73 45 0 Or | 15 31 0 S |
| Hafnia. *Copenhagen.* - - - | 0 51 0 | 12 45 0 Or | 55 40 45 S |
| *D*$^{va}$ Helenæ *Inf.* - - - - - | 0 24 0 | 6 0 0 Occ | 15 55 0 M |
| Hierosolyma - - - - - - | 2 21 20 | 35 20 0 Or | 31 55 0 S |
| Lima, *Peruv.* - - - - - | 5 8 16 | 77 4 0 Occ | 12 2 35 S |
| Londinum, *ad Divi Pauli.* - | 0 0 20 | 0 5 0 Occ | 51 30 40 S |
| Lutetiæ, *ad Observatorium.* - | 0 9 20 | 2 20 0 Or | 48 50 10 S |
| Macao, *Sinarum.* - - - - | 7 35 4 | 113 46 0 Or | 22 12 44 S |
| Massilia. *Marseille.* - - - - | 0 21 29 | 5 22 15 Or | 43 17 45 S |
| Matritum - - - - - - - | 0 14 58 | 3 44 30 Occ | 40 25 0 S |

| Locorum nomina | *Diff. temp.* H. M. S. | *Longitudines.* ° ′ ″ | | *Latitudines.* ° ′ ″ |
|---|---|---|---|---|
| Moſcua | 2 41 20 | 40 20 0 | Or | 55 36 0 S |
| Neapolis | 0 58 40 | 14 40 0 | Or | 40 50 45 S |
| Norimberga | 0 44 16 | 11 4 0 | Or | 49 26 0 S |
| OBSERVATORIUM reg. Gren v. | 0 0 0 | 0 0 0 | | 51 28 30 S |
| Ocrinum prom. *The Lizard* | 0 19 0 | 4 45 0 | Occ | 49 55 0 S |
| Olyſſipo. *Liſbon.* | 0 36 50 | 9 12 30 | Occ | 38 42 30 S |
| Oxonium | 0 5 4 | 1 16 0 | Occ | 51 45 0 S |
| Patavium | 0 47 42 | 11 55 30 | Or | 45 22 26 S |
| Pekin, *Sinarum.* | 7 45 20 | 116 20 0 | Or | 39 54 0 S |
| Petropolis. *St Peterſburgh.* | 2 1 20 | 30 20 0 | Or | 60 0 0 S |
| Porto belo, *Americ.* | 5 19 20 | 79 50 0 | Occ | 9 33 5 S |
| Praga *Bohemiæ* | 0 59 0 | 14 45 0 | Or | 50 4 30 S |
| Quito, *Urbs Americ.* | 5 13 20 | 78 20 0 | Occ | 0 13 11 M |
| Roma | 0 50 0 | 12 30 0 | Or | 41 54 0 S |
| Rupella. *Rochelle* | 0 5 4 | 1 16 0 | Occ | 46 9 43 S |
| Sherburne Caſtle | 0 4 0 | 1 0 0 | Occ | 51 39 25 S |
| Smyrna | 1 49 19 | 27 19 45 | Or | 38 28 7 S |
| Teneriſa mons | 1 6 12 | 16 33 0 | Occ | 28 23 27 S |
| Terra del Gada, *in Inſ. Madagaſcar* | 2 58 0 | 44 30 0 | Or | 19 29 0 M |
| Theſſalonica | 1 32 32 | 23 8 0 | Or | 40 41 10 S |
| Tornea, *Laponiæ* | 1 35 15 | 23 48 45 | Or | 65 50 50 S |
| Venetiæ | 0 48 18 | 12 4 30 | Or | 45 25 0 S |
| Vienna, *Auſtriæ* | 1 5 30 | 16 22 30 | Or | 48 12 48 S |
| Vindana portus. *Breſt.* | 0 18 3 | 4 30 45 | Occ | 48 23 0 S |
| Vitenberga. *Witemberg.* | 0 50 14 | 12 33 30 | Or | 51 43 10 S |
| Upſal | 1 11 0 | 17 45 0 | Or | 59 51 50 S |
| Uraniburgum | 0 51 26 | 12 51 30 | Or | 55 54 15 S |
| Wanſtead | 0 0 10 | 0 2 30 | Or | 51 34 0 S |

# TABULA DECLINATIONUM PUNCTORUM ECLIPTICÆ.

| Sig. | Arietis. Libræ. | Diff. | Tauri. Scorpii. | Diff. | Geminorum Sagittarii. | Diff. | |
|---|---|---|---|---|---|---|---|
| Gr. | gr. ′ ″ | ′ ″ | gr. ′ ″ | ′ ″ | gr. ′ ″ | ′ ″ | Gr. |
| 0 | 0 0 0 | 23 54 | 11 29 33 | 21 2 | 20 11 15 | 12 33 | 30 |
| 1 | 0 23 54 | 23 54 | 11 50 35 | 20 51 | 20 23 48 | 12 11 | 29 |
| 2 | 0 47 48 | 23 53 | 12 11 26 | 20 38 | 20 35 59 | 11 48 | 28 |
| 3 | 1 11 42 | 23 52 | 12 32 4 | 20 27 | 20 47 47 | 11 25 | 27 |
| 4 | 1 35 34 | 23 51 | 12 52 31 | 20 13 | 20 59 12 | 11 2 | 26 |
| 5 | 1 59 25 | 23 49 | 13 12 44 | 20 1 | 21 10 14 | 10 38 | 25 |
| 6 | 2 23 14 | 23 47 | 13 32 45 | 19 47 | 21 20 52 | 10 15 | 24 |
| 7 | 2 47 1 | 23 44 | 13 52 32 | 19 33 | 21 31 7 | 9 50 | 23 |
| 8 | 3 10 45 | 23 41 | 14 12 5 | 19 19 | 21 40 57 | 9 26 | 22 |
| 9 | 3 34 26 | 23 38 | 14 31 24 | 19 4 | 21 50 23 | 9 2 | 21 |
| 10 | 3 58 4 | 23 34 | 14 50 28 | 18 49 | 21 59 25 | 8 37 | 20 |
| 11 | 4 21 38 | 23 31 | 15 9 17 | 18 34 | 22 8 2 | 8 12 | 19 |
| 12 | 4 45 9 | 23 25 | 15 27 51 | 18 18 | 22 16 14 | 7 46 | 18 |
| 13 | 5 8 34 | 23 21 | 15 46 9 | 18 2 | 22 24 0 | 7 20 | 17 |
| 14 | 5 31 55 | 23 16 | 16 4 11 | 17 46 | 22 31 20 | 6 56 | 16 |
| 15 | 5 55 11 | 23 10 | 16 21 57 | 17 29 | 22 38 16 | 6 29 | 15 |
| 16 | 6 18 21 | 23 5 | 16 39 26 | 17 11 | 22 44 45 | 6 3 | 14 |
| 17 | 6 41 26 | 22 57 | 16 56 37 | 16 54 | 22 50 48 | 5 37 | 13 |
| 18 | 7 4 23 | 22 52 | 17 13 31 | 16 36 | 22 56 25 | 5 11 | 12 |
| 19 | 7 27 15 | 22 44 | 17 30 7 | 16 18 | 23 1 36 | 4 44 | 11 |
| 20 | 7 49 59 | 22 37 | 17 46 25 | 15 59 | 23 6 20 | 4 18 | 10 |
| 21 | 8 12 36 | 22 29 | 18 2 24 | 15 39 | 23 10 38 | 3 50 | 9 |
| 22 | 8 35 5 | 22 21 | 18 18 3 | 15 21 | 23 14 28 | 3 24 | 8 |
| 23 | 8 57 26 | 22 13 | 18 33 24 | 15 1 | 23 17 52 | 2 57 | 7 |
| 24 | 9 19 39 | 22 4 | 18 48 25 | 14 40 | 23 20 49 | 2 30 | 6 |
| 25 | 9 41 43 | 21 54 | 19 3 5 | 14 20 | 23 23 19 | 2 3 | 5 |
| 26 | 10 3 37 | 21 44 | 19 17 25 | 14 0 | 23 25 22 | 1 35 | 4 |
| 27 | 10 25 21 | 21 35 | 19 31 25 | 13 38 | 23 26 57 | 1 8 | 3 |
| 28 | 10 46 56 | 21 24 | 19 45 3 | 13 17 | 23 28 5 | 0 41 | 2 |
| 29 | 11 8 20 | 21 13 | 19 58 20 | 12 55 | 23 28 46 | 0 14 | 1 |
| 30 | 11 29 33 | | 20 11. 15 | | 23 29 00 | | 0 |
| | Virginis. Piscium. | Diff. | Leonis. Aquarii | Diff. | Cancri. Capricorni | Diff. | Gr. |

# TABULA ASCENSIONUM RECTARUM PUNCTORUM ECLIPTICÆ.

| Sig. | Arietis. | | | Diff. | | Tauri. | | | Diff. | | Geminorum | | | Diff. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gr. | gr. | ′ | ″ | ′ | ″ | gr. | ′ | ″ | ′ | ″ | gr. | ′ | ″ | ′ | ″ | Gr. |
| 0 | 0 | 0 | 0 | | | 27 | 54 | 9 | | | 57 | 48 | 36 | | | 0 |
| | | | | 55 | 2 | | | | 57 | 23 | | | | 62 | 34 | |
| 1 | 0 | 55 | 2 | | | 28 | 51 | 32 | | | 58 | 51 | 10 | | | 1 |
| | | | | 55 | 2 | | | | 57 | 31 | | | | 62 | 43 | |
| 2 | 1 | 50 | 4 | | | 29 | 49 | 3 | | | 59 | 53 | 53 | | | 2 |
| | | | | 55 | 3 | | | | 57 | 40 | | | | 62 | 53 | |
| 3 | 2 | 45 | 7 | | | 30 | 46 | 44 | | | 60 | 56 | 46 | | | 3 |
| | | | | 55 | 4 | | | | 57 | 49 | | | | 63 | 3 | |
| 4 | 3 | 40 | 11 | | | 31 | 44 | 33 | | | 61 | 59 | 49 | | | 4 |
| | | | | 55 | 5 | | | | 57 | 59 | | | | 63 | 13 | |
| 5 | 4 | 35 | 16 | | | 32 | 42 | 32 | | | 63 | 3 | 2 | | | 5 |
| | | | | 55 | 6 | | | | 58 | 9 | | | | 63 | 22 | |
| 6 | 5 | 30 | 22 | | | 33 | 40 | 41 | | | 64 | 6 | 24 | | | 6 |
| | | | | 55 | 8 | | | | 58 | 19 | | | | 63 | 30 | |
| 7 | 6 | 25 | 31 | | | 34 | 39 | 00 | | | 65 | 9 | 54 | | | 7 |
| | | | | 55 | 11 | | | | 58 | 28 | | | | 63 | 39 | |
| 8 | 7 | 20 | 42 | | | 35 | 37 | 28 | | | 66 | 13 | 33 | | | 8 |
| | | | | 55 | 13 | | | | 58 | 38 | | | | 63 | 48 | |
| 9 | 8 | 15 | 55 | | | 36 | 36 | 6 | | | 67 | 17 | 21 | | | 9 |
| | | | | 55 | 16 | | | | 58 | 49 | | | | 63 | 56 | |
| 10 | 9 | 11 | 11 | | | 37 | 34 | 55 | | | 68 | 21 | 18 | | | 10 |
| | | | | 55 | 19 | | | | 58 | 59 | | | | 64 | 4 | |
| 11 | 10 | 6 | 31 | | | 38 | 33 | 54 | | | 69 | 25 | 22 | | | 11 |
| | | | | 55 | 23 | | | | 59 | 9 | | | | 64 | 12 | |
| 12 | 11 | 1 | 54 | | | 39 | 33 | 3 | | | 70 | 29 | 34 | | | 12 |
| | | | | 55 | 26 | | | | 59 | 20 | | | | 64 | 19 | |
| 13 | 11 | 57 | 20 | | | 40 | 32 | 23 | | | 71 | 33 | 53 | | | 13 |
| | | | | 55 | 31 | | | | 59 | 31 | | | | 64 | 26 | |
| 14 | 12 | 52 | 51 | | | 41 | 31 | 54 | | | 72 | 38 | 19 | | | 14 |
| | | | | 55 | 35 | | | | 59 | 41 | | | | 64 | 33 | |
| 15 | 13 | 48 | 26 | | | 42 | 31 | 35 | | | 73 | 42 | 52 | | | 15 |
| | | | | 55 | 39 | | | | 59 | 52 | | | | 64 | 39 | |
| 16 | 14 | 44 | 5 | | | 43 | 31 | 27 | | | 74 | 47 | 31 | | | 16 |
| | | | | 55 | 44 | | | | 60 | 3 | | | | 64 | 45 | |
| 17 | 15 | 39 | 50 | | | 44 | 31 | 30 | | | 75 | 52 | 16 | | | 17 |
| | | | | 55 | 50 | | | | 60 | 14 | | | | 64 | 51 | |
| 18 | 16 | 35 | 40 | | | 45 | 31 | 43 | | | 76 | 57 | 7 | | | 18 |
| | | | | 55 | 56 | | | | 60 | 25 | | | | 64 | 56 | |
| 19 | 17 | 31 | 36 | | | 46 | 32 | 8 | | | 78 | 2 | 3 | | | 19 |
| | | | | 56 | 1 | | | | 60 | 36 | | | | 65 | 1 | |
| 20 | 18 | 27 | 37 | | | 47 | 32 | 44 | | | 79 | 7 | 4 | | | 20 |
| | | | | 56 | 7 | | | | 60 | 46 | | | | 65 | 5 | |
| 21 | 19 | 23 | 44 | | | 48 | 33 | 30 | | | 80 | 12 | 9 | | | 21 |
| | | | | 56 | 14 | | | | 60 | 58 | | | | 65 | 9 | |
| 22 | 20 | 19 | 58 | | | 49 | 34 | 28 | | | 81 | 17 | 18 | | | 22 |
| | | | | 56 | 21 | | | | 61 | 8 | | | | 65 | 12 | |
| 23 | 21 | 16 | 19 | | | 50 | 35 | 36 | | | 82 | 22 | 30 | | | 23 |
| | | | | 56 | 27 | | | | 61 | 19 | | | | 65 | 16 | |
| 24 | 22 | 12 | 46 | | | 51 | 36 | 55 | | | 83 | 27 | 46 | | | 24 |
| | | | | 56 | 34 | | | | 61 | 31 | | | | 65 | 18 | |
| 25 | 23 | 9 | 20 | | | 52 | 38 | 26 | | | 84 | 33 | 4 | | | 25 |
| | | | | 56 | 42 | | | | 61 | 41 | | | | 65 | 20 | |
| 26 | 24 | 6 | 2 | | | 53 | 40 | 7 | | | 85 | 38 | 24 | | | 26 |
| | | | | 56 | 50 | | | | 61 | 51 | | | | 65 | 22 | |
| 27 | 25 | 2 | 52 | | | 54 | 41 | 58 | | | 86 | 43 | 46 | | | 27 |
| | | | | 56 | 58 | | | | 62 | 2 | | | | 65 | 24 | |
| 28 | 25 | 59 | 50 | | | 55 | 44 | 0 | | | 87 | 49 | 10 | | | 28 |
| | | | | 57 | 5 | | | | 62 | 13 | | | | 65 | 25 | |
| 29 | 26 | 56 | 55 | | | 56 | 46 | 13 | | | 88 | 54 | 35 | | | 29 |
| | | | | 57 | 14 | | | | 62 | 23 | | | | 65 | 25 | |
| 30 | 27 | 54 | 9 | | | 57 | 48 | 36 | | | 90 | 0 | 0 | | | 30 |
| | ♈ | | | Diff. | | ♉ | | | Diff. | | ♊ | | | Diff. | | |

# TABULA ASCENSIONUM RECTARUM PUNCTORUM ECLIPTICÆ.

| Sig. | Cancri. | | | Diff. | | Leonis. | | | Diff. | | Virginis. | | | Diff. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gr. | gr. | ′ | ″ | ′ | ″ | gr. | ′ | ″ | ′ | ″ | gr. | ′ | ″ | ′ | ″ |
| 0 | 90 | 0 | 0 | | | 122 | 11 | 24 | | | 152 | 5 | 51 | | |
| | | | | 65 | 25 | | | | 62 | 23 | | | | 57 | 14 |
| 1 | 91 | 5 | 25 | 65 | 25 | 123 | 13 | 47 | 62 | 12 | 153 | 3 | 5 | 57 | 5 |
| 2 | 92 | 10 | 50 | 65 | 24 | 124 | 15 | 59 | 62 | 2 | 154 | 0 | 10 | 56 | 58 |
| 3 | 93 | 16 | 14 | 65 | 22 | 125 | 18 | 1 | 61 | 52 | 154 | 57 | 8 | 56 | 49 |
| 4 | 94 | 21 | 36 | 65 | 20 | 126 | 19 | 53 | 61 | 41 | 155 | 53 | 57 | 56 | 42 |
| 5 | 95 | 26 | 56 | | | 127 | 21 | 34 | | | 156 | 50 | 39 | | |
| | | | | 65 | 18 | | | | 61 | 31 | | | | 56 | 35 |
| 6 | 96 | 32 | 14 | 65 | 16 | 128 | 23 | 5 | 61 | 19 | 157 | 47 | 14 | 56 | 27 |
| 7 | 97 | 37 | 30 | 65 | 12 | 129 | 24 | 24 | 61 | 8 | 158 | 43 | 41 | 56 | 21 |
| 8 | 98 | 42 | 42 | 65 | 9 | 130 | 25 | 32 | 60 | 58 | 159 | 40 | 2 | 56 | 13 |
| 9 | 99 | 47 | 51 | 65 | 5 | 131 | 26 | 30 | 60 | 46 | 160 | 36 | 15 | 56 | 8 |
| 10 | 100 | 52 | 56 | | | 132 | 27 | 16 | | | 161 | 32 | 23 | | |
| | | | | 65 | 1 | | | | 60 | 36 | | | | 56 | 1 |
| 11 | 101 | 57 | 57 | 64 | 56 | 133 | 27 | 52 | 60 | 25 | 162 | 28 | 24 | 55 | 56 |
| 12 | 103 | 2 | 53 | 64 | 51 | 134 | 28 | 16 | 60 | 14 | 163 | 24 | 20 | 55 | 49 |
| 13 | 104 | 7 | 44 | 64 | 45 | 135 | 28 | 30 | 60 | 3 | 164 | 20 | 9 | 55 | 45 |
| 14 | 105 | 12 | 28 | 64 | 39 | 136 | 28 | 33 | 59 | 52 | 165 | 15 | 54 | 55 | 40 |
| 15 | 106 | 17 | 7 | | | 137 | 28 | 25 | | | 166 | 11 | 34 | | |
| | | | | 64 | 33 | | | | 59 | 41 | | | | 55 | 35 |
| 16 | 107 | 21 | 40 | 64 | 27 | 138 | 28 | 6 | 59 | 31 | 167 | 7 | 9 | 55 | 31 |
| 17 | 108 | 26 | 7 | 64 | 19 | 139 | 27 | 37 | 59 | 20 | 168 | 2 | 40 | 55 | 26 |
| 18 | 109 | 30 | 26 | 64 | 12 | 140 | 26 | 57 | 59 | 9 | 168 | 58 | 6 | 55 | 23 |
| 19 | 110 | 34 | 38 | 64 | 4 | 141 | 26 | 6 | 58 | 59 | 169 | 53 | 29 | 55 | 20 |
| 20 | 111 | 38 | 42 | | | 142 | 25 | 5 | | | 170 | 48 | 49 | | |
| | | | | 63 | 56 | | | | 58 | 49 | | | | 55 | 16 |
| 21 | 112 | 42 | 38 | 63 | 48 | 143 | 23 | 54 | 58 | 38 | 171 | 44 | 5 | 55 | 13 |
| 22 | 113 | 46 | 26 | 63 | 40 | 144 | 22 | 32 | 58 | 28 | 172 | 39 | 18 | 55 | 11 |
| 23 | 114 | 50 | 6 | 63 | 30 | 145 | 21 | 0 | 58 | 19 | 173 | 34 | 29 | 55 | 8 |
| 24 | 115 | 53 | 36 | 63 | 22 | 146 | 19 | 19 | 58 | 8 | 174 | 29 | 37 | 55 | 6 |
| 25 | 116 | 56 | 58 | | | 147 | 17 | 27 | | | 175 | 24 | 44 | | |
| | | | | 63 | 13 | | | | 57 | 59 | | | | 55 | 5 |
| 26 | 118 | 0 | 11 | 63 | 03 | 148 | 15 | 26 | 57 | 49 | 176 | 19 | 49 | 55 | 4 |
| 27 | 119 | 3 | 14 | 62 | 53 | 149 | 13 | 16 | 57 | 40 | 177 | 14 | 53 | 55 | 3 |
| 28 | 120 | 6 | 7 | 62 | 43 | 150 | 10 | 56 | 57 | 32 | 178 | 9 | 56 | 55 | 2 |
| 29 | 121 | 8 | 50 | 62 | 34 | 151 | 8 | 28 | 57 | 23 | 179 | 4 | 58 | 55 | 2 |
| 30 | 122 | 11 | 24 | | | 152 | 5 | 51 | | | 180 | 0 | 0 | | |
| | ♋ | | | Diff. | | | ♌ | | Diff. | | | ♍ | | Diff. | |

# TABULA ASCENSIONUM RECTARUM PUNCTORUM ECLIPTICÆ.

| Sig. | Libræ. | | | Diff. | | Scorpii. | | | Diff. | | Sagittarii. | | | Diff. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gr. | gr. | ′ | ″ | ′ | ″ | gr. | ′ | ″ | ′ | ″ | gr. | ′ | ″ | ′ | ″ |
| 0 | 180 | 0 | 0 | | | 207 | 54 | 9 | | | 237 | 48 | 36 | | |
| | | | | 55 | 2 | | | | 57 | 23 | | | | 62 | 34 |
| 1 | 180 | 55 | 2 | | | 208 | 51 | 32 | | | 238 | 51 | 10 | | |
| | | | | 55 | 2 | | | | 57 | 31 | | | | 62 | 43 |
| 2 | 181 | 50 | 4 | | | 209 | 49 | 3 | | | 239 | 53 | 53 | | |
| | | | | 55 | 3 | | | | 57 | 40 | | | | 62 | 53 |
| 3 | 182 | 45 | 7 | | | 210 | 46 | 44 | | | 240 | 56 | 46 | | |
| | | | | 55 | 4 | | | | 57 | 49 | | | | 63 | 3 |
| 4 | 183 | 40 | 11 | | | 211 | 44 | 33 | | | 241 | 59 | 49 | | |
| | | | | 55 | 5 | | | | 57 | 59 | | | | 63 | 13 |
| 5 | 184 | 35 | 16 | | | 212 | 42 | 32 | | | 243 | 3 | 2 | | |
| | | | | 55 | 6 | | | | 58 | 9 | | | | 63 | 22 |
| 6 | 185 | 30 | 22 | | | 213 | 40 | 41 | | | 244 | 6 | 24 | | |
| | | | | 55 | 8 | | | | 58 | 19 | | | | 63 | 30 |
| 7 | 186 | 25 | 31 | | | 214 | 39 | 00 | | | 245 | 9 | 54 | | |
| | | | | 55 | 11 | | | | 58 | 28 | | | | 63 | 39 |
| 8 | 187 | 20 | 42 | | | 215 | 37 | 28 | | | 246 | 13 | 33 | | |
| | | | | 55 | 13 | | | | 58 | 38 | | | | 63 | 48 |
| 9 | 188 | 15 | 55 | | | 216 | 36 | 6 | | | 247 | 17 | 21 | | |
| | | | | 55 | 16 | | | | 58 | 49 | | | | 63 | 56 |
| 10 | 189 | 11 | 11 | | | 217 | 34 | 55 | | | 248 | 21 | 18 | | |
| | | | | 55 | 19 | | | | 58 | 59 | | | | 64 | 4 |
| 11 | 190 | 6 | 31 | | | 218 | 33 | 54 | | | 249 | 25 | 22 | | |
| | | | | 55 | 23 | | | | 59 | 9 | | | | 64 | 12 |
| 12 | 191 | 1 | 54 | | | 219 | 33 | 3 | | | 250 | 29 | 34 | | |
| | | | | 55 | 26 | | | | 59 | 20 | | | | 64 | 19 |
| 13 | 191 | 57 | 20 | | | 220 | 32 | 23 | | | 251 | 33 | 53 | | |
| | | | | 55 | 31 | | | | 59 | 30 | | | | 64 | 26 |
| 14 | 192 | 52 | 51 | | | 221 | 31 | 54 | | | 252 | 38 | 19 | | |
| | | | | 55 | 35 | | | | 59 | 41 | | | | 64 | 33 |
| 15 | 193 | 48 | 26 | | | 222 | 31 | 35 | | | 253 | 42 | 52 | | |
| | | | | 55 | 39 | | | | 59 | 52 | | | | 64 | 39 |
| 16 | 194 | 44 | 5 | | | 223 | 31 | 27 | | | 254 | 47 | 31 | | |
| | | | | 55 | 44 | | | | 60 | 3 | | | | 64 | 45 |
| 17 | 195 | 39 | 50 | | | 224 | 31 | 30 | | | 255 | 52 | 16 | | |
| | | | | 55 | 50 | | | | 60 | 14 | | | | 64 | 51 |
| 18 | 196 | 35 | 40 | | | 225 | 31 | 43 | | | 256 | 57 | 7 | | |
| | | | | 55 | 56 | | | | 60 | 25 | | | | 64 | 56 |
| 19 | 197 | 31 | 36 | | | 226 | 32 | 8 | | | 258 | 2 | 3 | | |
| | | | | 56 | 1 | | | | 60 | 36 | | | | 65 | 1 |
| 20 | 198 | 27 | 37 | | | 227 | 32 | 43 | | | 259 | 7 | 4 | | |
| | | | | 56 | 7 | | | | 60 | 46 | | | | 65 | 5 |
| 21 | 199 | 23 | 44 | | | 228 | 33 | 30 | | | 260 | 12 | 9 | | |
| | | | | 56 | 14 | | | | 60 | 58 | | | | 65 | 9 |
| 22 | 200 | 19 | 58 | | | 229 | 34 | 28 | | | 261 | 17 | 18 | | |
| | | | | 56 | 21 | | | | 61 | 8 | | | | 65 | 12 |
| 23 | 201 | 16 | 19 | | | 230 | 35 | 36 | | | 262 | 22 | 30 | | |
| | | | | 56 | 27 | | | | 61 | 19 | | | | 65 | 16 |
| 24 | 202 | 12 | 46 | | | 231 | 36 | 55 | | | 263 | 27 | 46 | | |
| | | | | 56 | 34 | | | | 61 | 31 | | | | 65 | 18 |
| 25 | 203 | 9 | 20 | | | 232 | 38 | 26 | | | 264 | 33 | 4 | | |
| | | | | 56 | 42 | | | | 61 | 41 | | | | 65 | 20 |
| 26 | 204 | 6 | 2 | | | 233 | 40 | 7 | | | 265 | 38 | 24 | | |
| | | | | 56 | 50 | | | | 61 | 51 | | | | 65 | 22 |
| 27 | 205 | 2 | 52 | | | 234 | 41 | 58 | | | 266 | 43 | 46 | | |
| | | | | 56 | 58 | | | | 62 | 2 | | | | 65 | 24 |
| 28 | 205 | 59 | 50 | | | 235 | 44 | 0 | | | 267 | 49 | 10 | | |
| | | | | 57 | 5 | | | | 62 | 13 | | | | 65 | 25 |
| 29 | 206 | 56 | 55 | | | 236 | 46 | 13 | | | 268 | 54 | 35 | | |
| | | | | 57 | 14 | | | | 62 | 23 | | | | 65 | 25 |
| 30 | 207 | 54 | 9 | | | 237 | 48 | 36 | | | 270 | 0 | 0 | | |
| | ♎ | | | Diff | | ♏ | | | Diff | | ♐ | | | Diff. | |

# TABULA ASCENSIONUM RECTARUM PUNCTORUM ECLIPTICÆ.

| Sig. | Capricorni. | | | Diff. | | Aquarii. | | | Diff. | | Piſcium. | | | Diff. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gr. | gr. | ′ | ″ | ′ | ″ | gr. | ′ | ″ | ′ | ″ | gr. | ′ | ″ | ′ | ″ |
| 0 | 270 | 00 | 00 | | | 302 | 11 | 24 | | | 332 | 5 | 51 | | |
| | | | | 65 | 25 | | | | 62 | 23 | | | | 57 | 14 |
| 1 | 271 | 5 | 25 | | | 303 | 13 | 47 | | | 333 | 3 | 5 | | |
| | | | | 65 | 25 | | | | 62 | 12 | | | | 57 | 5 |
| 2 | 272 | 10 | 50 | | | 304 | 15 | 59 | | | 334 | 0 | 10 | | |
| | | | | 65 | 24 | | | | 62 | 2 | | | | 56 | 58 |
| 3 | 273 | 16 | 14 | | | 305 | 18 | 1 | | | 334 | 57 | 8 | | |
| | | | | 65 | 22 | | | | 61 | 52 | | | | 56 | 49 |
| 4 | 274 | 21 | 36 | | | 306 | 19 | 53 | | | 335 | 53 | 57 | | |
| | | | | 65 | 20 | | | | 61 | 41 | | | | 56 | 42 |
| 5 | 275 | 26 | 56 | | | 307 | 21 | 34 | | | 336 | 50 | 39 | | |
| | | | | 65 | 18 | | | | 61 | 31 | | | | 56 | 35 |
| 6 | 276 | 32 | 14 | | | 308 | 23 | 5 | | | 337 | 47 | 14 | | |
| | | | | 65 | 16 | | | | 61 | 19 | | | | 56 | 27 |
| 7 | 277 | 37 | 30 | | | 309 | 24 | 24 | | | 338 | 43 | 41 | | |
| | | | | 65 | 12 | | | | 61 | 8 | | | | 56 | 21 |
| 8 | 278 | 42 | 42 | | | 310 | 25 | 32 | | | 339 | 40 | 2 | | |
| | | | | 65 | 9 | | | | 60 | 58 | | | | 56 | 13 |
| 9 | 279 | 47 | 51 | | | 311 | 26 | 30 | | | 340 | 36 | 15 | | |
| | | | | 65 | 5 | | | | 60 | 46 | | | | 56 | 8 |
| 10 | 280 | 52 | 56 | | | 312 | 27 | 16 | | | 341 | 32 | 23 | | |
| | | | | 65 | 1 | | | | 60 | 36 | | | | 56 | 1 |
| 11 | 281 | 57 | 57 | | | 313 | 27 | 52 | | | 342 | 28 | 24 | | |
| | | | | 64 | 56 | | | | 60 | 25 | | | | 55 | 56 |
| 12 | 283 | 2 | 53 | | | 314 | 28 | 16 | | | 343 | 24 | 20 | | |
| | | | | 64 | 51 | | | | 60 | 14 | | | | 55 | 49 |
| 13 | 284 | 7 | 44 | | | 315 | 28 | 30 | | | 344 | 20 | 9 | | |
| | | | | 64 | 45 | | | | 60 | 3 | | | | 55 | 45 |
| 14 | 285 | 12 | 28 | | | 316 | 28 | 33 | | | 345 | 15 | 54 | | |
| | | | | 64 | 39 | | | | 59 | 52 | | | | 55 | 40 |
| 15 | 286 | 17 | 7 | | | 317 | 28 | 25 | | | 346 | 11 | 34 | | |
| | | | | 64 | 33 | | | | 59 | 41 | | | | 55 | 35 |
| 16 | 287 | 21 | 40 | | | 318 | 28 | 6 | | | 347 | 7 | 9 | | |
| | | | | 64 | 27 | | | | 59 | 31 | | | | 55 | 31 |
| 17 | 288 | 26 | 7 | | | 319 | 27 | 37 | | | 348 | 2 | 40 | | |
| | | | | 64 | 19 | | | | 59 | 20 | | | | 55 | 26 |
| 18 | 289 | 30 | 26 | | | 320 | 26 | 57 | | | 348 | 58 | 6 | | |
| | | | | 64 | 12 | | | | 59 | 9 | | | | 55 | 23 |
| 19 | 290 | 34 | 38 | | | 321 | 26 | 6 | | | 349 | 53 | 29 | | |
| | | | | 64 | 4 | | | | 58 | 59 | | | | 55 | 20 |
| 20 | 291 | 38 | 42 | | | 322 | 25 | 5 | | | 350 | 48 | 49 | | |
| | | | | 63 | 56 | | | | 58 | 49 | | | | 55 | 16 |
| 21 | 292 | 42 | 38 | | | 323 | 23 | 54 | | | 351 | 44 | 5 | | |
| | | | | 63 | 48 | | | | 58 | 38 | | | | 55 | 13 |
| 22 | 293 | 46 | 26 | | | 324 | 22 | 32 | | | 352 | 39 | 18 | | |
| | | | | 63 | 40 | | | | 58 | 28 | | | | 55 | 11 |
| 23 | 294 | 50 | 6 | | | 325 | 21 | 0 | | | 353 | 34 | 29 | | |
| | | | | 63 | 30 | | | | 58 | 19 | | | | 55 | 8 |
| 24 | 295 | 53 | 36 | | | 326 | 19 | 19 | | | 354 | 29 | 37 | | |
| | | | | 63 | 22 | | | | 58 | 8 | | | | 55 | 6 |
| 25 | 296 | 56 | 58 | | | 327 | 17 | 27 | | | 355 | 24 | 44 | | |
| | | | | 63 | 13 | | | | 57 | 59 | | | | 55 | 5 |
| 26 | 298 | 0 | 11 | | | 328 | 15 | 26 | | | 356 | 19 | 49 | | |
| | | | | 63 | 3 | | | | 57 | 49 | | | | 55 | 4 |
| 27 | 299 | 3 | 14 | | | 329 | 13 | 16 | | | 357 | 14 | 53 | | |
| | | | | 62 | 53 | | | | 57 | 40 | | | | 55 | 3 |
| 28 | 300 | 6 | 7 | | | 330 | 10 | 56 | | | 358 | 9 | 56 | | |
| | | | | 62 | 43 | | | | 57 | 32 | | | | 55 | 2 |
| 29 | 301 | 8 | 50 | | | 331 | 8 | 28 | | | 359 | 4 | 58 | | |
| | | | | 62 | 34 | | | | 57 | 23 | | | | 55 | 2 |
| 30 | 302 | 11 | 24 | | | 332 | 5 | 51 | | | 360 | 0 | 0 | | |
| | ♑ | | | Diff. | | ♒ | | | Diff. | | ♓ | | | Diff. | |

# TABULA ANGULORUM ECLIPTICÆ CUM MERIDIANO.

| Sig. | Arietis. Libræ. | | | Diff. | | Tauri. Scorpii. | | | Diff. | | Geminorum Sagittarii. | | | Diff. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gr. | gr. | ′ | ″ | ′ | ″ | gr. | ′ | ″ | ′ | ″ | gr. | ′ | ″ | ′ | ″ | Gr. |
| 0 | 66 | 31 | 00 | | | 69 | 22 | 51 | | | 77 | 44 | 38 | | | 30 |
| | | | | 0 | 11 | | | | 11 | 36 | | | | 21 | 42 | |
| 1 | 66 | 31 | 11 | | | 69 | 34 | 27 | | | 78 | 6 | 20 | | | 29 |
| | | | | 0 | 35 | | | | 11 | 59 | | | | 21 | 58 | |
| 2 | 66 | 31 | 46 | | | 69 | 46 | 26 | | | 78 | 28 | 18 | | | 28 |
| | | | | 0 | 57 | | | | 12 | 20 | | | | 22 | 13 | |
| 3 | 66 | 32 | 43 | | | 69 | 58 | 46 | | | 78 | 50 | 31 | | | 27 |
| | | | | 1 | 21 | | | | 12 | 44 | | | | 22 | 29 | |
| 4 | 66 | 34 | 4 | | | 70 | 11 | 30 | | | 79 | 13 | 0 | | | 26 |
| | | | | 1 | 43 | | | | 13 | 5 | | | | 22 | 45 | |
| 5 | 66 | 35 | 47 | | | 70 | 24 | 35 | | | 79 | 35 | 45 | | | 25 |
| | | | | 2 | 6 | | | | 13 | 27 | | | | 22 | 58 | |
| 6 | 66 | 37 | 53 | | | 70 | 38 | 2 | | | 79 | 58 | 43 | | | 24 |
| | | | | 2 | 30 | | | | 13 | 49 | | | | 23 | 12 | |
| 7 | 66 | 40 | 23 | | | 70 | 51 | 51 | | | 80 | 21 | 55 | | | 23 |
| | | | | 2 | 52 | | | | 14 | 11 | | | | 23 | 26 | |
| 8 | 66 | 43 | 15 | | | 71 | 6 | 2 | | | 80 | 45 | 21 | | | 22 |
| | | | | 3 | 15 | | | | 14 | 33 | | | | 23 | 40 | |
| 9 | 66 | 46 | 30 | | | 71 | 20 | 35 | | | 81 | 9 | 1 | | | 21 |
| | | | | 3 | 38 | | | | 14 | 54 | | | | 23 | 51 | |
| 10 | 66 | 50 | 8 | | | 71 | 35 | 29 | | | 81 | 32 | 52 | | | 20 |
| | | | | 4 | 1 | | | | 15 | 16 | | | | 24 | 4 | |
| 11 | 66 | 54 | 9 | | | 71 | 50 | 45 | | | 81 | 56 | 56 | | | 19 |
| | | | | 4 | 24 | | | | 15 | 37 | | | | 24 | 16 | |
| 12 | 66 | 58 | 33 | | | 72 | 6 | 22 | | | 82 | 21 | 12 | | | 18 |
| | | | | 4 | 47 | | | | 15 | 59 | | | | 24 | 27 | |
| 13 | 67 | 3 | 20 | | | 72 | 22 | 21 | | | 82 | 45 | 39 | | | 17 |
| | | | | 5 | 10 | | | | 16 | 19 | | | | 24 | 37 | |
| 14 | 67 | 8 | 30 | | | 72 | 38 | 40 | | | 83 | 10 | 16 | | | 16 |
| | | | | 5 | 33 | | | | 16 | 40 | | | | 24 | 47 | |
| 15 | 67 | 14 | 3 | | | 72 | 55 | 20 | | | 83 | 35 | 3 | | | 15 |
| | | | | 5 | 55 | | | | 17 | 1 | | | | 24 | 56 | |
| 16 | 67 | 19 | 58 | | | 73 | 12 | 21 | | | 83 | 59 | 59 | | | 14 |
| | | | | 6 | 19 | | | | 17 | 22 | | | | 25 | 6 | |
| 17 | 67 | 26 | 17 | | | 73 | 29 | 43 | | | 84 | 25 | 5 | | | 13 |
| | | | | 6 | 41 | | | | 17 | 41 | | | | 25 | 13 | |
| 18 | 67 | 32 | 58 | | | 73 | 47 | 24 | | | 84 | 50 | 18 | | | 12 |
| | | | | 7 | 4 | | | | 18 | 2 | | | | 25 | 22 | |
| 19 | 67 | 40 | 2 | | | 74 | 5 | 26 | | | 85 | 15 | 40 | | | 11 |
| | | | | 7 | 28 | | | | 18 | 22 | | | | 25 | 28 | |
| 20 | 67 | 47 | 30 | | | 74 | 23 | 48 | | | 85 | 41 | 8 | | | 10 |
| | | | | 7 | 49 | | | | 18 | 41 | | | | 25 | 35 | |
| 21 | 67 | 55 | 19 | | | 74 | 42 | 29 | | | 86 | 6 | 43 | | | 9 |
| | | | | 8 | 13 | | | | 19 | 0 | | | | 25 | 40 | |
| 22 | 68 | 3 | 32 | | | 75 | 1 | 29 | | | 86 | 32 | 23 | | | 8 |
| | | | | 8 | 36 | | | | 19 | 20 | | | | 25 | 46 | |
| 23 | 68 | 12 | 8 | | | 75 | 20 | 49 | | | 86 | 58 | 9 | | | 7 |
| | | | | 8 | 58 | | | | 19 | 39 | | | | 25 | 50 | |
| 24 | 68 | 21 | 6 | | | 75 | 40 | 28 | | | 87 | 23 | 59 | | | 6 |
| | | | | 9 | 21 | | | | 19 | 57 | | | | 25 | 54 | |
| 25 | 68 | 30 | 27 | | | 76 | 0 | 25 | | | 87 | 49 | 53 | | | 5 |
| | | | | 9 | 44 | | | | 20 | 15 | | | | 25 | 58 | |
| 26 | 68 | 40 | 11 | | | 76 | 20 | 40 | | | 88 | 15 | 51 | | | 4 |
| | | | | 10 | 6 | | | | 20 | 34 | | | | 26 | 0 | |
| 27 | 68 | 50 | 17 | | | 76 | 41 | 14 | | | 88 | 41 | 51 | | | 3 |
| | | | | 10 | 28 | | | | 20 | 51 | | | | 26 | 2 | |
| 28 | 69 | 0 | 45 | | | 77 | 2 | 5 | | | 89 | 7 | 53 | | | 2 |
| | | | | 10 | 52 | | | | 21 | 8 | | | | 26 | 3 | |
| 29 | 69 | 11 | 37 | | | 77 | 23 | 13 | | | 89 | 33 | 56 | | | 1 |
| | | | | 11 | 14 | | | | 21 | 25 | | | | 26 | 4 | |
| 30 | 69 | 22 | 51 | | | 77 | 44 | 38 | | | 90 | 0 | 0 | | | 0 |
| | Virginis. Piſcium. | | | Diff. | | Leonis. Aquarii. | | | Diff. | | Cancri. Capricorni. | | | Diff. | | Gr. |

# TABULÆ ÆQUATIONIS TEMPORIS.

*Subtrahe ab Apparente.*

Locus Solis Verus.

| Sig. | ♈ ♎ | ♉ ♏ | ♊ ♐ | |
|---|---|---|---|---|
| Gr. | ′ ″ | ′ ″ | ′ ″ | |
| 0 | 0 0 | 8 23 | 8 45 | 30 |
| 1 | 0 20 | 8 34 | 8 35 | 29 |
| 2 | 0 40 | 8 44 | 8 24 | 28 |
| 3 | 1 0 | 8 53 | 8 13 | 27 |
| 4 | 1 19 | 9 2 | 8 1 | 26 |
| 5 | 1 39 | 9 10 | 7 48 | 25 |
| 6 | 1 58 | 9 17 | 7 34 | 24 |
| 7 | 2 18 | 9 24 | 7 20 | 23 |
| 8 | 2 37 | 9 30 | 7 6 | 22 |
| 9 | 2 56 | 9 35 | 6 50 | 21 |
| 10 | 3 15 | 9 40 | 6 35 | 20 |
| 11 | 3 34 | 9 44 | 6 18 | 19 |
| 12 | 3 52 | 9 48 | 6 2 | 18 |
| 13 | 4 11 | 9 50 | 5 44 | 17 |
| 14 | 4 29 | 9 52 | 5 27 | 16 |
| 15 | 4 46 | 9 54 | 5 8 | 15 |
| 16 | 5 4 | 9 54 | 4 50 | 14 |
| 17 | 5 21 | 9 54 | 4 31 | 13 |
| 18 | 5 37 | 9 53 | 4 11 | 12 |
| 19 | 5 54 | 9 51 | 3 52 | 11 |
| 20 | 6 10 | 9 49 | 3 32 | 10 |
| 21 | 6 25 | 9 46 | 3 11 | 9 |
| 22 | 6 40 | 9 42 | 2 51 | 8 |
| 23 | 6 55 | 9 38 | 2 30 | 7 |
| 24 | 7 9 | 9 33 | 2 9 | 6 |
| 25 | 7 23 | 9 26 | 1 48 | 5 |
| 26 | 7 36 | 9 19 | 1 26 | 4 |
| 27 | 7 48 | 9 12 | 1 5 | 3 |
| 28 | 8 1 | 9 4 | 0 43 | 2 |
| 29 | 8 12 | 8 55 | 0 22 | 1 |
| 30 | 8 23 | 8 45 | 0 0 | 0 |
| | ′ ″ | ′ ″ | ′ ″ | Gr. |
| | ♓ ♍ | ♒ ♌ | ♑ ♋ | Sig. |

Adde ad Apparens.

*Subtrahe ab Apparente.*

Anomalia Solis Media.

| Sig. | 0 | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|---|
| Gr. | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | |
| 0 | 0 0 | 3 48 | 6 39 | 7 45 | 6 47 | 3 57 | 30 |
| 1 | 0 8 | 3 55 | 6 43 | 7 45 | 6 43 | 3 50 | 29 |
| 2 | 0 16 | 4 2 | 6 47 | 7 45 | 6 39 | 3 43 | 28 |
| 3 | 0 24 | 4 9 | 6 51 | 7 45 | 6 35 | 3 35 | 27 |
| 4 | 0 32 | 4 16 | 6 54 | 7 45 | 6 30 | 3 28 | 26 |
| 5 | 0 40 | 4 22 | 6 58 | 7 44 | 6 26 | 3 20 | 25 |
| 6 | 0 48 | 4 29 | 7 1 | 7 44 | 6 21 | 3 13 | 24 |
| 7 | 0 56 | 4 35 | 7 5 | 7 43 | 6 16 | 3 5 | 23 |
| 8 | 1 3 | 4 42 | 7 8 | 7 42 | 6 11 | 2 58 | 22 |
| 9 | 1 11 | 4 48 | 7 11 | 7 41 | 6 6 | 2 50 | 21 |
| 10 | 1 19 | 4 54 | 7 14 | 7 40 | 6 1 | 2 42 | 20 |
| 11 | 1 27 | 5 0 | 7 17 | 7 39 | 5 56 | 2 34 | 19 |
| 12 | 1 35 | 5 7 | 7 19 | 7 37 | 5 51 | 2 27 | 18 |
| 13 | 1 12 | 5 12 | 7 22 | 7 36 | 5 45 | 2 19 | 17 |
| 14 | 1 50 | 5 18 | 7 25 | 7 34 | 5 40 | 2 11 | 16 |
| 15 | 1 58 | 5 24 | 7 27 | 7 32 | 5 34 | 2 3 | 15 |
| 16 | 2 6 | 5 30 | 7 29 | 7 30 | 5 28 | 1 55 | 14 |
| 17 | 2 13 | 5 35 | 7 31 | 7 28 | 5 22 | 1 47 | 13 |
| 18 | 2 21 | 5 41 | 7 33 | 7 25 | 5 16 | 1 39 | 12 |
| 19 | 2 28 | 5 46 | 7 35 | 7 23 | 5 10 | 1 31 | 11 |
| 20 | 2 36 | 5 51 | 7 36 | 7 20 | 5 4 | 1 22 | 10 |
| 21 | 2 43 | 5 57 | 7 38 | 7 18 | 4 58 | 1 14 | 9 |
| 22 | 2 51 | 6 2 | 7 39 | 7 15 | 4 51 | 1 6 | 8 |
| 23 | 2 58 | 6 7 | 7 41 | 7 12 | 4 45 | 0 58 | 7 |
| 24 | 3 6 | 6 12 | 7 42 | 7 9 | 4 38 | 0 50 | 6 |
| 25 | 3 13 | 6 17 | 7 43 | 7 5 | 4 32 | 0 41 | 5 |
| 26 | 3 20 | 6 21 | 7 43 | 7 2 | 4 25 | 0 33 | 4 |
| 27 | 3 27 | 6 26 | 7 44 | 6 59 | 4 18 | 0 25 | 3 |
| 28 | 3 34 | 6 30 | 7 44 | 6 55 | 4 11 | 0 17 | 2 |
| 29 | 3 41 | 6 35 | 7 45 | 6 51 | 4 4 | 0 8 | 1 |
| 30 | 3 48 | 6 39 | 7 45 | 6 47 | 3 57 | 0 0 | 0 |
| | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | Gr. |
| | 11 | 10 | 9 | 8 | 7 | 6 | Sig. |

Adde ad Apparens.

## TABULA ÆQUATIONIS TEMPORIS COMPOSITÆ, EXISTENTE APOGEO SOLIS *in* VIII^gr. CANCRI.

| *Sig.* | ♈ | ♉ | ♊ | ♋ | ♌ | ♍ | ♎ | ♏ | ♐ | ♑ | ♒ | ♓ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Add.* | *Sub.* | *Sub.* | *Add.* | *Add.* | *Add.* | *Sub.* | *Sub.* | *Sub.* | *Sub.* | *Add.* | *Add.* |
| *Gr.* | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ |
| 0 | 7 40 | 1 9 | 3 56 | 1 6 | 5 49 | 2 14 | 7 42 | 15 32 | 13 29 | 1 4 | 11 38 | 14 26 |
| 1 | 7 21 | 1 23 | 3 52 | 1 19 | 5 51 | 1 58 | 8 3 | 15 40 | 13 13 | 0 35 | 11 55 | 14 20 |
| 2 | 7 2 | 1 36 | 3 47 | 1 33 | 5 52 | 1 41 | 8 24 | 15 47 | 12 56 | 0 5 | 12 12 | 14 13 |
| 3 | 6 43 | 1 49 | 3 43 | 1 47 | 5 53 | 1 24 | 8 44 | 15 53 | 12 38 | +25 | 12 27 | 14 6 |
| 4 | 6 24 | 2 1 | 3 38 | 2 0 | 5 53 | 1 7 | 9 4 | 15 58 | 12 19 | 0 54 | 12 41 | 13 59 |
| 5 | 6 5 | 2 13 | 3 32 | 2 13 | 5 52 | 0 50 | 9 24 | 16 2 | 11 59 | 1 23 | 12 54 | 13 50 |
| 6 | 5 46 | 2 23 | 3 25 | 2 26 | 5 51 | 0 32 | 9 43 | 16 5 | 11 38 | 1 53 | 13 7 | 13 41 |
| 7 | 5 27 | 2 34 | 3 18 | 2 38 | 5 49 | 0 13 | 10 3 | 16 8 | 11 17 | 2 22 | 13 20 | 13 30 |
| 8 | 5 8 | 2 44 | 3 11 | 2 51 | 5 47 | − 5 | 10 22 | 16 10 | 10 55 | 2 51 | 13 32 | 13 20 |
| 9 | 4 49 | 2 53 | 3 3 | 3 4 | 5 44 | 0 24 | 10 41 | 16 11 | 10 33 | 3 19 | 13 43 | 13 9 |
| 10 | 4 30 | 3 2 | 2 54 | 3 16 | 5 40 | 0 44 | 11 0 | 16 11 | 10 10 | 3 48 | 13 53 | 12 57 |
| 11 | 4 11 | 3 10 | 2 44 | 3 27 | 5 35 | 1 4 | 11 18 | 16 11 | 9 46 | 4 16 | 14 2 | 12 45 |
| 12 | 3 53 | 3 17 | 2 35 | 3 38 | 5 30 | 1 24 | 11 36 | 16 10 | 9 22 | 4 43 | 14 11 | 12 33 |
| 13 | 3 34 | 3 25 | 2 24 | 3 50 | 5 24 | 1 44 | 11 53 | 16 8 | 8 58 | 5 11 | 14 19 | 12 20 |
| 14 | 3 16 | 3 32 | 2 15 | 4 1 | 5 17 | 2 4 | 12 10 | 16 5 | 8 34 | 5 38 | 14 25 | 12 6 |
| 15 | 2 57 | 3 39 | 2 4 | 4 11 | 5 10 | 2 24 | 12 27 | 16 1 | 8 8 | 6 4 | 14 31 | 11 52 |
| 16 | 2 39 | 3 45 | 1 53 | 4 21 | 5 2 | 2 45 | 12 43 | 15 57 | 7 42 | 6 30 | 14 36 | 11 37 |
| 17 | 2 21 | 3 50 | 1 41 | 4 30 | 4 54 | 3 6 | 12 59 | 15 52 | 7 15 | 6 55 | 14 40 | 11 22 |
| 18 | 2 3 | 3 54 | 1 29 | 4 39 | 4 45 | 3 27 | 13 14 | 15 46 | 6 48 | 7 21 | 14 43 | 11 7 |
| 19 | 1 45 | 3 57 | 1 18 | 4 48 | 4 36 | 3 48 | 13 29 | 15 39 | 6 21 | 7 45 | 14 46 | 10 52 |
| 20 | 1 27 | 4 0 | 1 6 | 4 57 | 4 26 | 4 9 | 13 43 | 15 32 | 5 53 | 8 10 | 14 48 | 10 36 |
| 21 | 1 10 | 4 2 | 0 53 | 5 5 | 4 15 | 4 30 | 13 57 | 15 24 | 5 25 | 8 34 | 14 49 | 10 19 |
| 22 | 0 53 | 4 4 | 0 41 | 5 12 | 4 4 | 4 51 | 14 10 | 15 14 | 4 58 | 8 57 | 14 50 | 10 2 |
| 23 | 0 37 | 4 6 | 0 28 | 5 18 | 3 52 | 5 12 | 14 22 | 15 3 | 4 30 | 9 19 | 14 50 | 9 45 |
| 24 | 0 20 | 4 6 | 0 15 | 5 24 | 3 39 | 5 34 | 14 34 | 14 51 | 4 1 | 9 41 | 14 49 | 9 28 |
| 25 | 0 4 | 4 6 | 0 2 | 5 31 | 3 27 | 5 55 | 14 46 | 14 39 | 3 32 | 10 2 | 14 47 | 9 11 |
| 26 | −11 | 4 5 | +12 | 5 36 | 3 13 | 6 17 | 14 56 | 14 27 | 3 2 | 10 23 | 14 45 | 8 53 |
| 27 | 0 26 | 4 4 | 0 25 | 5 40 | 2 59 | 6 39 | 15 6 | 14 14 | 2 33 | 10 42 | 14 41 | 8 35 |
| 28 | 0 41 | 4 2 | 0 39 | 5 43 | 2 45 | 7 0 | 15 15 | 14 0 | 2 3 | 11 1 | 14 37 | 8 17 |
| 29 | 0 56 | 3 59 | 0 53 | 5 46 | 2 30 | 7 21 | 15 24 | 13 45 | 1 33 | 11 20 | 14 32 | 7 59 |
| 30 | 1 9 | 3 56 | 1 6 | 5 49 | 2 14 | 7 42 | 15 32 | 13 29 | 1 4 | 11 38 | 14 26 | 7 40 |

*Add.* & + *sunt addenda Tempori apparenti,*
*Sub.* & − *subtrahenda sunt* } *ut habeatur Tempus medium.*

## EPOCHÆ MEDIORUM MOTUUM SOLIS ET PRIMÆ STELLÆ ARIETIS.

| Annis Juli-anis ineun-tibus. | Anomalia Media Solis. S. o. ′ ″ ‴ | Apog. ☉ ♋ 6gr. o. ′ ″ | Pr. ♈is. ♈ 28° ′ ″ | Annis Juli-anis ineun-tibus. | Anomalia Media Solis. S. o. ′ ″ ‴ | Apog. ☉ ♋ 7gr. o. ′ ″ | Ima ✱ ♈is. ♈ 28gr. o. ′ ″ |
|---|---|---|---|---|---|---|---|
| 1661 | 6 13 26 36 52 | 58 43 | 26 50 | 1696 | 6 12 22 48 37 | 34 7 | 56 0 |
| 62 | 6 13 11 16 29 | 59 44 | 27 40 | 97 | 6 13 6 36 23 | 35 7 | 56 50 |
| 63 | 6 12 55 56 5 | 7 0 45 | 28 30 | 98 | 6 12 51 16 0 | 36 8 | 57 40 |
| 64 | 6 12 40 35 42 | 1 45 | 29 20 | 99 | 6 12 35 55 37 | 37 9 | 58 30 |
| 1665 | 6 13 24 23 29 | 2 46 | 30 10 | 1700 | 6 12 20 35 13 | 38 9 | 59 20 |
| 1666 | 6 13 9 3 6 | 3 47 | 31 0 | 1701 | 6 13 4 23 0 | 39 10 | 29 0 10 |
| 67 | 6 12 53 42 42 | 4 47 | 31 50 | 2 | 6 12 49 2 37 | 40 11 | 1 0 |
| 68 | 6 12 38 22 19 | 5 48 | 32 40 | 3 | 6 12 33 42 13 | 41 11 | 1 50 |
| 69 | 6 13 22 10 6 | 6 49 | 33 30 | 4 | 6 12 18 21 50 | 42 12 | 2 40 |
| 1670 | 6 13 6 49 42 | 7 49 | 34 20 | 1705 | 6 13 2 9 37 | 43 13 | 3 30 |
| 1671 | 6 12 51 29 19 | 8 50 | 35 10 | 1706 | 6 12 46 49 14 | 44 13 | 4 20 |
| 72 | 6 12 36 8 56 | 9 51 | 36 0 | 7 | 6 12 31 28 50 | 45 14 | 5 10 |
| 73 | 6 13 19 56 42 | 10 51 | 36 50 | 8 | 6 12 16 8 27 | 46 15 | 6 0 |
| 74 | 6 13 4 36 19 | 11 52 | 37 40 | 9 | 6 12 59 56 14 | 47 15 | 6 50 |
| 1675 | 6 12 49 15 56 | 12 53 | 38 30 | 1710 | 6 12 44 35 50 | 48 16 | 7 40 |
| 1676 | 6 12 33 55 33 | 13 53 | 39 20 | 1711 | 6 12 29 15 27 | 49 17 | 8 30 |
| 77 | 6 13 17 43 19 | 14 54 | 40 10 | 12 | 6 12 13 55 4 | 50 17 | 9 20 |
| 78 | 6 13 2 22 56 | 15 55 | 41 0 | 13 | 6 12 57 42 50 | 51 18 | 10 10 |
| 79 | 6 12 47 2 33 | 16 55 | 41 50 | 14 | 6 12 42 22 27 | 52 19 | 11 00 |
| 1680 | 6 12 31 42 9 | 17 56 | 42 40 | 1715 | 6 12 27 2 4 | 53 19 | 11 50 |
| 1681 | 6 13 15 29 56 | 18 57 | 43 30 | 1716 | 6 12 11 41 41 | 54 20 | 12 40 |
| 82 | 6 13 0 9 33 | 19 57 | 44 20 | 17 | 6 12 55 29 27 | 55 21 | 13 30 |
| 83 | 6 12 44 49 9 | 20 58 | 45 10 | 18 | 6 12 40 9 4 | 56 21 | 14 20 |
| 84 | 6 12 29 28 46 | 21 59 | 46 0 | 19 | 6 12 24 48 41 | 57 22 | 15 10 |
| 1685 | 6 13 13 16 33 | 22 59 | 46 50 | 1720 | 6 12 9 28 17 | 58 23 | 16 00 |
| 1686 | 6 12 57 56 10 | 24 0 | 47 40 | 1721 | 6 12 53 16 4 | 59 23 | 16 50 |
| 87 | 6 12 42 35 46 | 25 1 | 48 30 | 22 | 6 12 37 55 41 | 8 0 24 | 17 40 |
| 88 | 6 12 27 15 23 | 26 1 | 49 20 | 23 | 6 12 22 35 17 | 1 25 | 18 30 |
| 89 | 6 13 11 3 10 | 27 2 | 50 10 | 24 | 6 12 7 14 54 | 2 25 | 19 20 |
| 1690 | 6 12 55 42 46 | 28 3 | 51 0 | 1725 | 6 12 51 2 41 | 3 26 | 20 10 |
| 1691 | 6 12 40 22 23 | 29 3 | 51 50 | 1726 | 6 12 35 42 18 | 4 27 | 21 00 |
| 92 | 6 12 25 2 0 | 30 4 | 52 40 | 27 | 6 12 20 21 54 | 5 27 | 21 50 |
| 93 | 6 13 8 49 46 | 31 5 | 53 30 | 28 | 6 12 5 1 31 | 6 28 | 22 40 |
| 94 | 6 12 53 29 23 | 32 5 | 54 20 | 29 | 6 12 48 49 18 | 7 29 | 23 30 |
| 1695 | 6 12 38 9 0 | 33 6 | 55 10 | 1730 | 6 12 33 28 54 | 8 29 | 24 20 |

# EPOCHÆ MEDIORUM MOTUUM SOLIS ET PRIMÆ STELLÆ ARIETIS.

| Annis Julianis ineuntibus. | Anomalia Media Solis. | Apog. ☉ ♋ 8gr. | Pr. ♈is. ♈ 29° |
|---|---|---|---|
| | S. o. ′ ″ ‴ | ′ ″ | ′ ″ |
| 1731 | 6 12 18 8 31 | 9 30 | 25 10 |
| 32 | 6 12 2 48 8 | 10 31 | 26 0 |
| 33 | 6 12 46 35 54 | 11 31 | 26 50 |
| 34 | 6 12 31 15 31 | 12 32 | 27 40 |
| 1735 | 6 12 15 55 8 | 13 33 | 28 30 |
| 1736 | 6 12 0 34 45 | 14 33 | 29 20 |
| 37 | 6 12 44 22 31 | 15 34 | 30 10 |
| 38 | 6 12 29 2 8 | 16 35 | 31 0 |
| 39 | 6 12 13 41 45 | 17 35 | 31 50 |
| 1740 | 6 11 58 21 21 | 18 36 | 32 40 |
| 1741 | 6 12 42 9 8 | 19 37 | 33 30 |
| 42 | 6 12 26 48 45 | 20 37 | 34 20 |
| 43 | 6 12 11 28 21 | 21 38 | 35 10 |
| 44 | 6 11 56 7 58 | 22 39 | 36 0 |
| 1745 | 6 12 39 55 45 | 23 39 | 36 50 |
| 1746 | 6 12 24 35 22 | 24 40 | 37 40 |
| 47 | 6 12 9 14 58 | 25 41 | 38 30 |
| 48 | 6 11 53 54 35 | 26 41 | 39 20 |
| 49 | 6 12 37 42 22 | 27 42 | 40 10 |
| 1750 | 6 12 22 21 58 | 28 43 | 41 0 |
| 1751 | 6 12 7 1 35 | 29 43 | 41 50 |
| 52 | 6 11 51 41 12 | 30 44 | 42 40 |
| 53 | 6 12 35 28 58 | 31 45 | 43 30 |
| 54 | 6 12 20 8 35 | 32 45 | 44 20 |
| 1755 | 6 12 4 48 12 | 33 46 | 45 10 |
| 1756 | 6 11 49 27 49 | 34 47 | 46 0 |
| 57 | 6 12 33 15 35 | 35 47 | 46 50 |
| 58 | 6 12 17 55 12 | 36 48 | 47 40 |
| 59 | 6 12 2 34 49 | 37 49 | 48 30 |
| 1760 | 6 11 47 14 25 | 38 49 | 49 20 |
| 1761 | 6 12 31 2 12 | 39 50 | 50 10 |
| 62 | 6 12 15 41 49 | 40 51 | 51 0 |
| 63 | 6 12 0 21 25 | 41 51 | 51 50 |
| 64 | 6 11 45 1 2 | 42 52 | 52 40 |
| 1765 | 6 12 28 48 49 | 43 53 | 53 30 |

| Annis Julianis ineuntibus. | Anomalia Media Solis. | Apog. ☉ ♋ 8gr. | I^ma ✶ ♈is. ♈ 29gr. |
|---|---|---|---|
| | S. o. ′ ″ ‴ | o. ′ ″ | o. ′ ″ |
| 1766 | 6 12 13 28 26 | 44 53 | 54 20 |
| 67 | 6 11 58 8 2 | 45 54 | 55 10 |
| 68 | 6 11 42 47 39 | 46 55 | 56 0 |
| 69 | 6 12 26 35 26 | 47 55 | 56 50 |
| 1770 | 6 12 11 15 2 | 48 56 | 57 40 |
| 1771 | 6 11 55 54 39 | 49 57 | 58 30 |
| 72 | 6 11 40 34 16 | 50 57 | 59 20 |
| 73 | 6 12 24 22 2 | 51 58 | 0 0 10 |
| 74 | 6 12 9 1 39 | 52 59 | ♌ 1 0 |
| 1775 | 6 11 53 41 16 | 53 59 | 1 50 |
| 1776 | 6 11 38 20 53 | 55 0 | 2 40 |
| 77 | 6 12 22 8 39 | 56 1 | 3 30 |
| 78 | 6 12 6 48 16 | 57 1 | 4 20 |
| 79 | 6 11 51 27 53 | 58 2 | 5 10 |
| 1780 | 6 11 36 7 29 | 59 3 | 6 0 |
| 1781 | 6 12 19 55 16 | 9 0 3 | 6 50 |
| 82 | 6 12 4 34 53 | 1 4 | 7 40 |
| 83 | 6 11 49 14 29 | 2 5 | 8 30 |
| 84 | 6 11 33 54 6 | 3 5 | 9 20 |
| 1785 | 6 12 17 41 53 | 4 6 | 10 10 |
| 1786 | 6 12 2 21 30 | 5 7 | 11 0 |
| 87 | 6 11 47 1 6 | 6 7 | 11 50 |
| 88 | 6 11 31 40 43 | 7 8 | 12 40 |
| 89 | 6 12 15 28 30 | 8 9 | 13 30 |
| 1790 | 6 12 0 8 6 | 9 9 | 14 20 |
| 1791 | 6 11 44 47 43 | 10 10 | 15 10 |
| 92 | 6 11 29 27 20 | 11 11 | 16 0 |
| 93 | 6 12 13 15 6 | 12 11 | 16 50 |
| 94 | 6 11 57 54 43 | 13 12 | 17 40 |
| 1795 | 6 11 42 34 20 | 14 13 | 18 30 |
| 1796 | 6 11 27 13 57 | 15 13 | 19 20 |
| 97 | 6 12 11 1 43 | 16 14 | 20 10 |
| 98 | 6 11 55 41 20 | 17 15 | 21 0 |
| 99 | 6 11 40 20 57 | 18 15 | 21 50 |
| 1800 | 6 11 25 0 33 | 19 16 | 22 40 |

# *MOTUS ANOMALIÆ MEDIÆ SOLIS AD DIES MENSIUM.*

| Die Mensis. | JANUARII Anomalia media ☉ | | | | | FEBRUARII Anomalia media ☉ | | | | | MARTII Anomalia media ☉ | | | | | APRILIS Anomalia media ☉ | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S. | o. | ′ | ″ | ‴ | S. | o. | ′ | ″ | ‴ | S. | o. | ′ | ″ | ‴ | S. | o. | ′ | ″ | ‴ |
| 1 | 0 | 0 | 59 | 8 | 10 | 1 | 1 | 32 | 21 | 14 | 1 | 29 | 8 | 9 | 48 | 2 | 29 | 41 | 22 | 52 |
| 2 | 0 | 1 | 58 | 16 | 20 | 1 | 2 | 31 | 29 | 23 | 2 | 0 | 7 | 17 | 58 | 3 | 0 | 40 | 31 | 2 |
| 3 | 0 | 2 | 57 | 24 | 29 | 1 | 3 | 30 | 37 | 33 | 2 | 1 | 6 | 26 | 8 | 3 | 1 | 39 | 39 | 11 |
| 4 | 0 | 3 | 56 | 32 | 39 | 1 | 4 | 29 | 45 | 43 | 2 | 2 | 5 | 34 | 17 | 3 | 2 | 38 | 47 | 21 |
| 5 | 0 | 4 | 55 | 40 | 49 | 1 | 5 | 28 | 53 | 53 | 2 | 3 | 4 | 42 | 27 | 3 | 3 | 37 | 55 | 31 |
| 6 | 0 | 5 | 54 | 48 | 59 | 1 | 6 | 28 | 2 | 3 | 2 | 4 | 3 | 50 | 37 | 3 | 4 | 37 | 3 | 41 |
| 7 | 0 | 6 | 53 | 57 | 9 | 1 | 7 | 27 | 10 | 12 | 2 | 5 | 2 | 58 | 47 | 3 | 5 | 36 | 11 | 51 |
| 8 | 0 | 7 | 53 | 5 | 18 | 1 | 8 | 26 | 18 | 22 | 2 | 6 | 2 | 6 | 57 | 3 | 6 | 35 | 20 | 0 |
| 9 | 0 | 8 | 52 | 13 | 28 | 1 | 9 | 25 | 26 | 32 | 2 | 7 | 1 | 15 | 6 | 3 | 7 | 34 | 28 | 10 |
| 10 | 0 | 9 | 51 | 21 | 38 | 1 | 10 | 24 | 34 | 42 | 2 | 8 | 0 | 23 | 16 | 3 | 8 | 33 | 36 | 20 |
| 11 | 0 | 10 | 50 | 29 | 48 | 1 | 11 | 23 | 42 | 52 | 2 | 8 | 59 | 31 | 26 | 3 | 9 | 32 | 44 | 30 |
| 12 | 0 | 11 | 49 | 37 | 58 | 1 | 12 | 22 | 51 | 1 | 2 | 9 | 58 | 39 | 36 | 3 | 10 | 31 | 52 | 40 |
| 13 | 0 | 12 | 48 | 46 | 7 | 1 | 13 | 21 | 59 | 11 | 2 | 10 | 57 | 47 | 46 | 3 | 11 | 31 | 0 | 49 |
| 14 | 0 | 13 | 47 | 54 | 17 | 1 | 14 | 21 | 7 | 21 | 2 | 11 | 56 | 55 | 55 | 3 | 12 | 30 | 8 | 59 |
| 15 | 0 | 14 | 47 | 2 | 27 | 1 | 15 | 20 | 15 | 31 | 2 | 12 | 56 | 4 | 5 | 3 | 13 | 29 | 17 | 9 |
| 16 | 0 | 15 | 46 | 10 | 37 | 1 | 16 | 19 | 23 | 41 | 2 | 13 | 55 | 12 | 15 | 3 | 14 | 28 | 25 | 19 |
| 17 | 0 | 16 | 45 | 18 | 47 | 1 | 17 | 18 | 31 | 50 | 2 | 14 | 54 | 20 | 25 | 3 | 15 | 27 | 33 | 29 |
| 18 | 0 | 17 | 44 | 26 | 56 | 1 | 18 | 17 | 40 | 0 | 2 | 15 | 53 | 28 | 35 | 3 | 16 | 26 | 41 | 38 |
| 19 | 0 | 18 | 43 | 35 | 6 | 1 | 19 | 16 | 48 | 10 | 2 | 16 | 52 | 36 | 44 | 3 | 17 | 25 | 49 | 48 |
| 20 | 0 | 19 | 42 | 43 | 16 | 1 | 20 | 15 | 56 | 20 | 2 | 17 | 51 | 44 | 54 | 3 | 18 | 24 | 57 | 58 |
| 21 | 0 | 20 | 41 | 51 | 26 | 1 | 21 | 15 | 4 | 30 | 2 | 18 | 50 | 53 | 4 | 3 | 19 | 24 | 6 | 8 |
| 22 | 0 | 21 | 40 | 59 | 36 | 1 | 22 | 14 | 12 | 39 | 2 | 19 | 50 | 1 | 14 | 3 | 20 | 23 | 14 | 18 |
| 23 | 0 | 22 | 40 | 7 | 45 | 1 | 23 | 13 | 20 | 49 | 2 | 20 | 49 | 9 | 24 | 3 | 21 | 22 | 22 | 27 |
| 24 | 0 | 23 | 39 | 15 | 55 | 1 | 24 | 12 | 28 | 59 | 2 | 21 | 48 | 17 | 33 | 3 | 22 | 21 | 30 | 37 |
| 25 | 0 | 24 | 38 | 24 | 5 | 1 | 25 | 11 | 37 | 9 | 2 | 22 | 47 | 25 | 43 | 3 | 23 | 20 | 38 | 47 |
| 26 | 0 | 25 | 37 | 32 | 15 | 1 | 26 | 10 | 45 | 19 | 2 | 23 | 46 | 33 | 53 | 3 | 24 | 19 | 46 | 57 |
| 27 | 0 | 26 | 36 | 40 | 25 | 1 | 27 | 9 | 53 | 28 | 2 | 24 | 45 | 42 | 3 | 3 | 25 | 18 | 55 | 7 |
| 28 | 0 | 27 | 35 | 48 | 34 | 1 | 28 | 9 | 1 | 38 | 2 | 25 | 44 | 50 | 13 | 3 | 26 | 18 | 3 | 16 |
| 29 | 0 | 28 | 34 | 56 | 44 | *In Anno* Bissextili *post* Februarium adde unius diei motum. | | | | | 2 | 26 | 43 | 58 | 22 | 3 | 27 | 17 | 11 | 26 |
| 30 | 0 | 29 | 34 | 4 | 54 | | | | | | 2 | 27 | 43 | 6 | 32 | 3 | 28 | 16 | 19 | 36 |
| 31 | 1 | 0 | 33 | 13 | 4 | | | | | | 2 | 28 | 42 | 14 | 42 | | | | | |
| | *Mot. Apog.* | | 5 | 9 | | | | | 9 | 49 | | | | 14 | 57 | | | | 19 | 56 |
| | *Mot.* ☊ ruin | | | 4 | 15 | | | | 8 | 5 | | | | 12 | 19 | | | | 16 | 26 |

## *MOTVS ANOMALIÆ MEDIÆ SOLIS AD DIES MENSIVM.*

| Die Mensis. | MAII Anomalia media ☉ | | | | | JUNII Anomalia media ☉ | | | | | JULII Anomalia media ☉ | | | | | AUGUSTI Anomalia media ☉ | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S. | o. | ′ | ″ | ‴ | S. | o. | ′ | ″ | ‴ | S. | o. | ′ | ″ | ‴ | S. | o. | ′ | ″ | ‴ |
| 1 | 3 | 29 | 15 | 27 | 46 | 4 | 29 | 48 | 40 | 50 | 5 | 29 | 22 | 45 | 44 | 6 | 29 | 55 | 58 | 47 |
| 2 | 4 | 0 | 14 | 35 | 56 | 5 | 0 | 47 | 48 | 59 | 6 | 0 | 21 | 53 | 53 | 7 | 0 | 55 | 6 | 57 |
| 3 | 4 | 1 | 13 | 44 | 5 | 5 | 1 | 46 | 57 | 9 | 6 | 1 | 21 | 2 | 3 | 7 | 1 | 54 | 15 | 7 |
| 4 | 4 | 2 | 12 | 52 | 15 | 5 | 2 | 46 | 5 | 19 | 6 | 2 | 20 | 10 | 13 | 7 | 2 | 53 | 23 | 17 |
| 5 | 4 | 3 | 12 | 0 | 25 | 5 | 3 | 45 | 13 | 29 | 6 | 3 | 19 | 18 | 23 | 7 | 3 | 52 | 31 | 27 |
| 6 | 4 | 4 | 11 | 8 | 35 | 5 | 4 | 44 | 21 | 39 | 6 | 4 | 18 | 26 | 33 | 7 | 4 | 51 | 39 | 36 |
| 7 | 4 | 5 | 10 | 16 | 45 | 5 | 5 | 43 | 29 | 48 | 6 | 5 | 17 | 34 | 42 | 7 | 5 | 50 | 47 | 46 |
| 8 | 4 | 6 | 9 | 24 | 54 | 5 | 6 | 42 | 37 | 58 | 6 | 6 | 16 | 42 | 52 | 7 | 6 | 49 | 55 | 56 |
| 9 | 4 | 7 | 8 | 33 | 4 | 5 | 7 | 41 | 46 | 8 | 6 | 7 | 15 | 51 | 2 | 7 | 7 | 49 | 4 | 6 |
| 10 | 4 | 8 | 7 | 41 | 14 | 5 | 8 | 40 | 54 | 18 | 6 | 8 | 14 | 59 | 12 | 7 | 8 | 48 | 12 | 16 |
| 11 | 4 | 9 | 6 | 49 | 24 | 5 | 9 | 40 | 2 | 28 | 6 | 9 | 14 | 7 | 22 | 7 | 9 | 47 | 20 | 25 |
| 12 | 4 | 10 | 5 | 57 | 34 | 5 | 10 | 39 | 10 | 37 | 6 | 10 | 13 | 15 | 31 | 7 | 10 | 46 | 28 | 35 |
| 13 | 4 | 11 | 5 | 5 | 43 | 5 | 11 | 38 | 18 | 47 | 6 | 11 | 12 | 23 | 41 | 7 | 11 | 45 | 36 | 45 |
| 14 | 4 | 12 | 4 | 13 | 53 | 5 | 12 | 37 | 26 | 57 | 6 | 12 | 11 | 31 | 51 | 7 | 12 | 44 | 44 | 55 |
| 15 | 4 | 13 | 3 | 22 | 3 | 5 | 13 | 36 | 35 | 7 | 6 | 13 | 10 | 40 | 1 | 7 | 13 | 43 | 53 | 5 |
| 16 | 4 | 14 | 2 | 30 | 13 | 5 | 14 | 35 | 43 | 17 | 6 | 14 | 9 | 48 | 11 | 7 | 14 | 43 | 1 | 14 |
| 17 | 4 | 15 | 1 | 38 | 23 | 5 | 15 | 34 | 51 | 26 | 6 | 15 | 8 | 56 | 20 | 7 | 15 | 42 | 9 | 24 |
| 18 | 4 | 16 | 0 | 46 | 32 | 5 | 16 | 33 | 59 | 36 | 6 | 16 | 8 | 4 | 30 | 7 | 16 | 41 | 17 | 34 |
| 19 | 4 | 16 | 59 | 54 | 42 | 5 | 17 | 33 | 7 | 46 | 6 | 17 | 7 | 12 | 40 | 7 | 17 | 40 | 25 | 44 |
| 20 | 4 | 17 | 59 | 2 | 52 | 5 | 18 | 32 | 15 | 56 | 6 | 18 | 6 | 20 | 50 | 7 | 18 | 39 | 33 | 54 |
| 21 | 4 | 18 | 58 | 11 | 2 | 5 | 19 | 31 | 24 | 6 | 6 | 19 | 5 | 29 | 0 | 7 | 19 | 38 | 42 | 3 |
| 22 | 4 | 19 | 57 | 19 | 12 | 5 | 20 | 30 | 32 | 15 | 6 | 20 | 4 | 37 | 9 | 7 | 20 | 37 | 50 | 13 |
| 23 | 4 | 20 | 56 | 27 | 21 | 5 | 21 | 29 | 40 | 25 | 6 | 21 | 3 | 45 | 19 | 7 | 21 | 36 | 58 | 23 |
| 24 | 4 | 21 | 55 | 35 | 31 | 5 | 22 | 28 | 48 | 35 | 6 | 22 | 2 | 53 | 29 | 7 | 22 | 36 | 6 | 33 |
| 25 | 4 | 22 | 54 | 43 | 41 | 5 | 23 | 27 | 56 | 45 | 6 | 23 | 2 | 1 | 39 | 7 | 23 | 35 | 14 | 43 |
| 26 | 4 | 23 | 53 | 51 | 51 | 5 | 24 | 27 | 4 | 55 | 6 | 24 | 1 | 9 | 49 | 7 | 24 | 34 | 22 | 52 |
| 27 | 4 | 24 | 53 | 0 | 1 | 5 | 25 | 26 | 13 | 4 | 6 | 25 | 0 | 17 | 58 | 7 | 25 | 33 | 31 | 2 |
| 28 | 4 | 25 | 52 | 8 | 10 | 5 | 26 | 25 | 21 | 14 | 6 | 25 | 59 | 26 | 8 | 7 | 26 | 32 | 39 | 12 |
| 29 | 4 | 26 | 51 | 16 | 20 | 5 | 27 | 24 | 29 | 24 | 6 | 26 | 58 | 34 | 18 | 7 | 27 | 31 | 47 | 22 |
| 30 | 4 | 27 | 50 | 24 | 30 | 5 | 28 | 23 | 37 | 34 | 6 | 27 | 57 | 42 | 28 | 7 | 28 | 30 | 55 | 32 |
| 31 | 4 | 28 | 49 | 32 | 40 | | | | ″ | ‴ | 6 | 28 | 56 | 50 | 38 | 7 | 29 | 30 | 3 | 41 |
| | *Mot. Apog.* | | 25 | | 5 | | | | 30 | 4 | | | | 35 | 13 | | | | 40 | 23 |
| | *Mot.* ☀rum | | 20 | | 40 | | | | 24 | 46 | | | | 29 | 1 | | | | 33 | 15 |

## *MOTUS ANOMALIÆ MEDIÆ SOLIS AD DIES MENSIUM.*

| Die Mensis. | SEPTEMBRIS Anomalia media ☉ | | | | | OCTOBRIS Anomalia media ☉ | | | | | NOVEMBRIS Anomalia media ☉ | | | | | DECEMBRIS. Anomalia media ☉ | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S. | o. | ′ | ″ | ‴ | S. | o. | ′ | ″ | ‴ | S. | o. | ′ | ″ | ‴ | S. | o. | ′ | ″ | ‴ |
| 1 | 8 | 0 | 29 | 11 | 51 | 9 | 0 | 3 | 16 | 45 | 10 | 0 | 36 | 29 | 49 | 11 | 0 | 10 | 34 | 43 |
| 2 | 8 | 1 | 28 | 20 | 1 | 9 | 1 | 2 | 24 | 55 | 10 | 1 | 35 | 37 | 59 | 11 | 1 | 9 | 42 | 53 |
| 3 | 8 | 2 | 27 | 28 | 11 | 9 | 2 | 1 | 33 | 5 | 10 | 2 | 34 | 46 | 9 | 11 | 2 | 8 | 51 | 3 |
| 4 | 8 | 3 | 26 | 36 | 21 | 9 | 3 | 0 | 41 | 15 | 10 | 3 | 33 | 54 | 18 | 11 | 3 | 7 | 59 | 12 |
| 5 | 8 | 4 | 25 | 44 | 30 | 9 | 3 | 59 | 49 | 24 | 10 | 4 | 33 | 2 | 28 | 11 | 4 | 7 | 7 | 22 |
| 6 | 8 | 5 | 24 | 52 | 40 | 9 | 4 | 58 | 57 | 34 | 10 | 5 | 32 | 10 | 38 | 11 | 5 | 6 | 15 | 32 |
| 7 | 8 | 6 | 24 | 0 | 50 | 9 | 5 | 58 | 5 | 44 | 10 | 6 | 31 | 18 | 48 | 11 | 6 | 5 | 23 | 42 |
| 8 | 8 | 7 | 23 | 9 | 0 | 9 | 6 | 57 | 13 | 54 | 10 | 7 | 30 | 26 | 58 | 11 | 7 | 4 | 31 | 52 |
| 9 | 8 | 8 | 22 | 17 | 10 | 9 | 7 | 56 | 22 | 4 | 10 | 8 | 29 | 35 | 7 | 11 | 8 | 3 | 40 | 1 |
| 10 | 8 | 9 | 21 | 25 | 19 | 9 | 8 | 55 | 30 | 13 | 10 | 9 | 28 | 43 | 17 | 11 | 9 | 2 | 48 | 11 |
| 11 | 8 | 10 | 20 | 33 | 29 | 9 | 9 | 54 | 38 | 23 | 10 | 10 | 27 | 51 | 27 | 11 | 10 | 1 | 56 | 21 |
| 12 | 8 | 11 | 19 | 41 | 39 | 9 | 10 | 53 | 46 | 33 | 10 | 11 | 26 | 59 | 37 | 11 | 11 | 1 | 4 | 31 |
| 13 | 8 | 12 | 18 | 49 | 49 | 9 | 11 | 52 | 54 | 43 | 10 | 12 | 26 | 7 | 47 | 11 | 12 | 0 | 12 | 41 |
| 14 | 8 | 13 | 17 | 57 | 59 | 9 | 12 | 52 | 2 | 53 | 10 | 13 | 25 | 15 | 56 | 11 | 12 | 59 | 20 | 50 |
| 15 | 8 | 14 | 17 | 6 | 8 | 9 | 13 | 51 | 11 | 2 | 10 | 14 | 24 | 24 | 6 | 11 | 13 | 58 | 29 | 0 |
| 16 | 8 | 15 | 16 | 14 | 18 | 9 | 14 | 50 | 19 | 12 | 10 | 15 | 23 | 32 | 16 | 11 | 14 | 57 | 37 | 10 |
| 17 | 8 | 16 | 15 | 22 | 28 | 9 | 15 | 49 | 27 | 22 | 10 | 16 | 22 | 40 | 26 | 11 | 15 | 56 | 45 | 20 |
| 18 | 8 | 17 | 14 | 30 | 38 | 9 | 16 | 48 | 35 | 32 | 10 | 17 | 21 | 48 | 36 | 11 | 16 | 55 | 53 | 30 |
| 19 | 8 | 18 | 13 | 38 | 48 | 9 | 17 | 47 | 43 | 42 | 10 | 18 | 20 | 56 | 45 | 11 | 17 | 55 | 1 | 39 |
| 20 | 8 | 19 | 12 | 46 | 57 | 9 | 18 | 46 | 51 | 51 | 10 | 19 | 20 | 4 | 55 | 11 | 18 | 54 | 9 | 49 |
| 21 | 8 | 20 | 11 | 55 | 7 | 9 | 19 | 46 | 0 | 1 | 10 | 20 | 19 | 13 | 5 | 11 | 19 | 53 | 17 | 59 |
| 22 | 8 | 21 | 11 | 3 | 17 | 9 | 20 | 45 | 8 | 11 | 10 | 21 | 18 | 21 | 15 | 11 | 20 | 52 | 26 | 9 |
| 23 | 8 | 22 | 10 | 11 | 27 | 9 | 21 | 44 | 16 | 21 | 10 | 22 | 17 | 29 | 25 | 11 | 21 | 51 | 34 | 19 |
| 24 | 8 | 23 | 9 | 19 | 37 | 9 | 22 | 43 | 24 | 31 | 10 | 23 | 16 | 37 | 34 | 11 | 22 | 50 | 42 | 28 |
| 25 | 8 | 24 | 8 | 27 | 46 | 9 | 23 | 42 | 32 | 40 | 10 | 24 | 15 | 45 | 44 | 11 | 23 | 49 | 50 | 38 |
| 26 | 8 | 25 | 7 | 35 | 56 | 9 | 24 | 41 | 40 | 50 | 10 | 25 | 14 | 53 | 54 | 11 | 24 | 48 | 58 | 48 |
| 27 | 8 | 26 | 6 | 44 | 6 | 9 | 25 | 40 | 49 | 0 | 10 | 26 | 14 | 2 | 4 | 11 | 25 | 48 | 6 | 58 |
| 28 | 8 | 27 | 5 | 52 | 16 | 9 | 26 | 39 | 57 | 10 | 10 | 27 | 13 | 10 | 14 | 11 | 26 | 47 | 15 | 8 |
| 29 | 8 | 28 | 5 | 0 | 26 | 9 | 27 | 39 | 5 | 20 | 10 | 28 | 12 | 18 | 23 | 11 | 27 | 46 | 23 | 17 |
| 30 | 8 | 29 | 4 | 8 | 35 | 9 | 28 | 38 | 13 | 29 | 10 | 29 | 11 | 26 | 33 | 11 | 28 | 45 | 31 | 27 |
| 31 | | | | ″ | ‴ | 9 | 29 | 37 | 21 | 39 | | | | ″ | ‴ | 11 | 29 | 44 | 39 | 37 |
| | *Mot. Apog.* | | | 45 | 22 | | | | 50 | 32 | | | | 55 | 31 | | | 1 | 0 | 40 |
| | *Mot.* ✳rum | | | 37 | 22 | | | | 41 | 37 | | | | 45 | 44 | | | | 50 | 0 |

# MOTUS ANOMALIÆ MEDIÆ ET APOGEI SOLIS, ET FIXARUM AB ÆQUINOCTIO.

## IN ANNORUM CENTURIIS

| Annis Julian. Collect. | Mot. Anom. Mediæ Solis. S. | o. | ′ | ″ | ‴ | Mot. Apog. Solis. o. | ′ | ″ | Fixarum ab Æquinoct. o. | ′ | ″ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 11 | 29 | 4 | 25 | 20 | 1 | 41 | 7 | 1 | 23 | 20 |
| 200 | 11 | 28 | 8 | 50 | 40 | 3 | 22 | 13 | 2 | 46 | 40 |
| 300 | 11 | 27 | 13 | 16 | 0 | 5 | 3 | 20 | 4 | 10 | 0 |
| 400 | 11 | 26 | 17 | 41 | 20 | 6 | 44 | 27 | 5 | 33 | 20 |
| 500 | 11 | 25 | 22 | 6 | 40 | 8 | 25 | 33 | 6 | 56 | 40 |
| 600 | 11 | 24 | 26 | 32 | 0 | 10 | 6 | 40 | 8 | 20 | 0 |
| 700 | 11 | 23 | 30 | 57 | 20 | 11 | 47 | 47 | 9 | 43 | 20 |
| 800 | 11 | 22 | 35 | 22 | 40 | 13 | 28 | 53 | 11 | 6 | 40 |
| 900 | 11 | 21 | 39 | 48 | 0 | 15 | 10 | 0 | 12 | 30 | 0 |
| 1000 | 11 | 20 | 44 | 13 | 20 | 16 | 51 | 7 | 13 | 53 | 20 |
| 1100 | 11 | 19 | 48 | 38 | 40 | 18 | 32 | 13 | 15 | 16 | 40 |
| 1200 | 11 | 18 | 53 | 4 | 0 | 20 | 13 | 20 | 16 | 40 | 0 |
| 1300 | 11 | 17 | 57 | 29 | 20 | 21 | 54 | 27 | 18 | 3 | 20 |
| 1400 | 11 | 17 | 1 | 54 | 40 | 23 | 35 | 33 | 19 | 26 | 40 |
| 1500 | 11 | 16 | 6 | 20 | 0 | 25 | 16 | 40 | 20 | 50 | 0 |
| 1600 | 11 | 15 | 10 | 45 | 20 | 26 | 57 | 47 | 22 | 13 | 20 |
| 1700 | 11 | 14 | 15 | 10 | 40 | 28 | 38 | 53 | 23 | 36 | 40 |
| 1800 | 11 | 13 | 19 | 36 | 0 | 30 | 20 | 0 | 25 | 0 | 0 |
| 1900 | 11 | 12 | 24 | 1 | 20 | 32 | 1 | 7 | 26 | 23 | 20 |
| 2000 | 11 | 11 | 28 | 26 | 40 | 33 | 42 | 13 | 27 | 46 | 40 |
| 2100 | 11 | 10 | 32 | 52 | 0 | 35 | 23 | 20 | 29 | 10 | 0 |
| 2200 | 11 | 9 | 37 | 17 | 20 | 37 | 4 | 27 | 30 | 33 | 20 |
| 2300 | 11 | 8 | 41 | 42 | 40 | 38 | 45 | 33 | 31 | 56 | 40 |
| 2400 | 11 | 7 | 46 | 8 | 0 | 40 | 26 | 40 | 33 | 20 | 0 |
| 2500 | 11 | 6 | 50 | 33 | 20 | 42 | 7 | 47 | 34 | 43 | 20 |
| 2600 | 11 | 5 | 54 | 58 | 40 | 43 | 48 | 53 | 36 | 6 | 40 |
| 2700 | 11 | 4 | 59 | 24 | 0 | 45 | 30 | 0 | 37 | 30 | 0 |
| 2800 | 11 | 4 | 3 | 49 | 20 | 47 | 11 | 7 | 38 | 53 | 20 |
| 2900 | 11 | 3 | 8 | 14 | 40 | 48 | 52 | 13 | 40 | 16 | 40 |
| 3000 | 11 | 2 | 12 | 40 | 0 | 50 | 33 | 20 | 41 | 40 | 0 |
| 3100 | 11 | 1 | 17 | 5 | 20 | 52 | 14 | 27 | 43 | 3 | 20 |
| 3200 | 11 | 0 | 21 | 30 | 40 | 53 | 55 | 33 | 44 | 26 | 40 |

## IN HORIS ET MIN.

### Motus Anomaliæ Mediæ Solis.

| H. | ′ | ″ | ‴ | ⅣV | ′ | ″ | ‴ | ⅣV | ′ | ″ | ‴ | ⅣV |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 27 | 50 | | 31 | 1 | 16 | 23 | | | | |
| 2 | 4 | 55 | 41 | | 32 | 1 | 18 | 51 | | | | |
| 3 | 7 | 23 | 31 | | 33 | 1 | 21 | 19 | | | | |
| 4 | 9 | 51 | 22 | | 34 | 1 | 23 | 47 | | | | |
| 5 | 12 | 19 | 12 | | 35 | 1 | 26 | 14 | | | | |
| 6 | 14 | 47 | 2 | | 36 | 1 | 28 | 42 | | | | |
| 7 | 17 | 14 | 53 | | 37 | 1 | 31 | 10 | | | | |
| 8 | 19 | 42 | 43 | | 38 | 1 | 33 | 38 | | | | |
| 9 | 22 | 10 | 34 | | 39 | 1 | 36 | 6 | | | | |
| 10 | 24 | 38 | 24 | | 40 | 1 | 38 | 34 | | | | |
| 11 | 27 | 6 | 14 | | 41 | 1 | 41 | 1 | | | | |
| 12 | 29 | 34 | 5 | | 42 | 1 | 43 | 29 | | | | |
| 13 | 32 | 1 | 55 | | 43 | 1 | 45 | 57 | | | | |
| 14 | 34 | 29 | 46 | | 44 | 1 | 48 | 25 | | | | |
| 15 | 36 | 57 | 36 | | 45 | 1 | 50 | 53 | | | | |
| 16 | 39 | 25 | 27 | | 46 | 1 | 53 | 21 | | | | |
| 17 | 41 | 53 | 17 | | 47 | 1 | 55 | 48 | | | | |
| 18 | 44 | 21 | 7 | | 48 | 1 | 58 | 16 | | | | |
| 19 | 46 | 48 | 58 | | 49 | 2 | 0 | 44 | | | | |
| 20 | 49 | 16 | 48 | | 50 | 2 | 3 | 12 | | | | |
| 21 | 51 | 44 | 39 | | 51 | 2 | 5 | 40 | | | | |
| 22 | 54 | 12 | 29 | | 52 | 2 | 8 | 8 | | | | |
| 23 | 56 | 40 | 19 | | 53 | 2 | 10 | 36 | | | | |
| 24 | 59 | 8 | 10 | | 54 | 2 | 13 | 3 | | | | |
| 25 | 61 | 36 | 0 | | 55 | 2 | 15 | 31 | | | | |
| 26 | 64 | 3 | 51 | | 56 | 2 | 17 | 59 | | | | |
| 27 | 66 | 31 | 41 | | 57 | 2 | 20 | 27 | | | | |
| 28 | 68 | 59 | 31 | | 58 | 2 | 22 | 55 | | | | |
| 29 | 71 | 27 | 22 | | 59 | 2 | 25 | 23 | | | | |
| 30 | 73 | 55 | 12 | | 60 | 2 | 27 | 50 | | | | |

# TABULA ÆQUATIONUM SOLIS.

*Anomalia media Solis.*

| Gr. | Sig. o. Subtr. | Sig. I. Subtr. | Sig. II. Subtr. | Sig. III. Subtr. | Sig. IV. Subtr. | Sig. V. Subtr. | |
|---|---|---|---|---|---|---|---|
| | o. ′ ″ | o. ′ ″ | o. ′ ″ | o. ′ ″ | o. ′ ″ | o. ′ ″ | |
| 0 | 0 0 0 | 0 57 7 | 1 39 41 | 1 56 19 | 1 41 48 | 0 59 15 | 30 |
| 1 | 0 1 59 | 0 58 51 | 1 40 42 | 1 56 20 | 1 40 48 | 0 57 26 | 29 |
| 2 | 0 3 59 | 1 0 33 | 1 41 41 | 1 56 19 | 1 39 46 | 0 55 37 | 28 |
| 3 | 0 5 58 | 1 2 15 | 1 42 39 | 1 56 16 | 1 38 41 | 0 53 48 | 27 |
| 4 | 0 7 57 | 1 3 55 | 1 43 35 | 1 56 12 | 1 37 35 | 0 51 57 | 26 |
| 5 | 0 9 56 | 1 5 35 | 1 44 29 | 1 56 5 | 1 36 27 | 0 50 5 | 25 |
| 6 | 0 11 55 | 1 7 14 | 1 45 21 | 1 55 56 | 1 35 17 | 0 48 13 | 24 |
| 7 | 0 13 53 | 1 8 51 | 1 46 11 | 1 55 45 | 1 34 5 | 0 46 19 | 23 |
| 8 | 0 15 51 | 1 10 27 | 1 47 0 | 1 55 31 | 1 32 52 | 0 44 25 | 22 |
| 9 | 0 17 49 | 1 12 1 | 1 47 46 | 1 55 15 | 1 31 37 | 0 42 30 | 21 |
| 10 | 0 19 47 | 1 13 35 | 1 48 31 | 1 54 58 | 1 30 20 | 0 40 34 | 20 |
| 11 | 0 21 45 | 1 15 7 | 1 49 13 | 1 54 38 | 1 29 1 | 0 38 37 | 19 |
| 12 | 0 23 42 | 1 16 38 | 1 49 53 | 1 54 16 | 1 27 41 | 0 36 40 | 18 |
| 13 | 0 25 38 | 1 18 7 | 1 50 32 | 1 53 52 | 1 26 19 | 0 34 41 | 17 |
| 14 | 0 27 35 | 1 19 36 | 1 51 9 | 1 53 26 | 1 24 55 | 0 32 42 | 16 |
| 15 | 0 29 30 | 1 21 3 | 1 51 44 | 1 52 58 | 1 23 30 | 0 30 43 | 15 |
| 16 | 0 31 25 | 1 22 28 | 1 52 17 | 1 52 27 | 1 22 3 | 0 28 43 | 14 |
| 17 | 0 33 20 | 1 23 51 | 1 52 48 | 1 51 55 | 1 20 35 | 0 26 42 | 13 |
| 18 | 0 35 14 | 1 25 14 | 1 53 16 | 1 51 20 | 1 19 5 | 0 24 41 | 12 |
| 19 | 0 37 8 | 1 26 35 | 1 53 43 | 1 50 44 | 1 17 33 | 0 22 39 | 11 |
| 20 | 0 39 1 | 1 27 55 | 1 54 7 | 1 50 5 | 1 16 0 | 0 20 37 | 10 |
| 21 | 0 40 53 | 1 29 13 | 1 54 30 | 1 49 24 | 1 14 26 | 0 18 34 | 9 |
| 22 | 0 42 44 | 1 30 29 | 1 54 50 | 1 48 42 | 1 12 50 | 0 16 31 | 8 |
| 23 | 0 44 35 | 1 31 43 | 1 55 9 | 1 47 57 | 1 11 13 | 0 14 28 | 7 |
| 24 | 0 46 25 | 1 32 56 | 1 55 25 | 1 47 11 | 1 9 34 | 0 12 24 | 6 |
| 25 | 0 48 14 | 1 34 8 | 1 55 39 | 1 46 22 | 1 7 54 | 0 10 21 | 5 |
| 26 | 0 50 2 | 1 35 18 | 1 55 51 | 1 45 31 | 1 6 13 | 0 8 17 | 4 |
| 27 | 0 51 50 | 1 36 26 | 1 56 1 | 1 44 38 | 1 4 31 | 0 6 13 | 3 |
| 28 | 0 53 36 | 1 37 33 | 1 56 9 | 1 43 43 | 1 2 47 | 0 4 9 | 2 |
| 29 | 0 55 22 | 1 38 38 | 1 56 15 | 1 42 47 | 1 1 2 | 0 2 4 | 1 |
| 30 | 0 57 7 | 1 39 41 | 1 56 19 | 1 41 48 | 0 59 15 | 0 0 0 | 0 |
| | Sig. XI. Adde. | Sig. X. Adde. | Sig. IX. Adde. | Sig. VIII. Adde. | Sig. VII. Adde. | Sig. VI. Adde. | Gr. |

## LOGARITHMI DISTANTIARUM SOLIS A TERRA.

*Anomalia media Solis.*

| Gr. | Sig. o. Logar. | Sig. I. Logar. | Sig. II. Logar. | Sig. III. Logar. | Sig. IV. Logar. | Sig. V. Logar. | |
|---|---|---|---|---|---|---|---|
| 0 | 5 007286 | 5 006347 | 5 003749 | 5 000124 | 4 996405 | 4 993620 | 30 |
| 1 | 5 007285 | 5 006284 | 5 003640 | 4 999995 | 4 996292 | 4 993555 | 29 |
| 2 | 5 007282 | 5 006220 | 5 003531 | 4 999867 | 4 996180 | 4 993491 | 28 |
| 3 | 5 007277 | 5 006154 | 5 003420 | 4 999739 | 4 996069 | 4 993429 | 27 |
| 4 | 5 007269 | 5 006087 | 5 003307 | 4 999611 | 4 995959 | 4 993369 | 26 |
| 5 | 5 007260 | 5 006018 | 5 003194 | 4 999483 | 4 995850 | 4 993311 | 25 |
| 6 | 5 007249 | 5 005946 | 5 003080 | 4 999354 | 4 995742 | 4 993255 | 24 |
| 7 | 5 007235 | 5 005872 | 5 002965 | 4 999227 | 4 995636 | 4 993201 | 23 |
| 8 | 5 007218 | 5 005797 | 5 002849 | 4 999099 | 4 995531 | 4 993150 | 22 |
| 9 | 5 007200 | 5 005720 | 5 002732 | 4 998971 | 4 995427 | 4 993102 | 21 |
| 10 | 5 007180 | 5 005642 | 5 002614 | 4 998844 | 4 995325 | 4 993055 | 20 |
| 11 | 5 007158 | 5 005562 | 5 002495 | 4 998717 | 4 995224 | 4 993009 | 19 |
| 12 | 5 007134 | 5 005480 | 5 002375 | 4 998590 | 4 995126 | 4 992966 | 18 |
| 13 | 5 007107 | 5 005397 | 5 002254 | 4 998463 | 4 995028 | 4 992926 | 17 |
| 14 | 5 007079 | 5 005312 | 5 002134 | 4 998336 | 4 994932 | 4 992888 | 16 |
| 15 | 5 007048 | 5 005225 | 5 002012 | 4 998210 | 4 994836 | 4 992852 | 15 |
| 16 | 5 007015 | 5 005136 | 5 001890 | 4 998084 | 4 994743 | 4 992818 | 14 |
| 17 | 5 006980 | 5 005047 | 5 001767 | 4 997960 | 4 994652 | 4 992786 | 13 |
| 18 | 5 006943 | 5 004956 | 5 001643 | 4 997837 | 4 994562 | 4 992757 | 12 |
| 19 | 5 006905 | 5 004863 | 5 001518 | 4 997714 | 4 994474 | 4 992731 | 11 |
| 20 | 5 006864 | 5 004768 | 5 001393 | 4 997591 | 4 994387 | 4 992706 | 10 |
| 21 | 5 006821 | 5 004672 | 5 001268 | 4 997468 | 4 994302 | 4 992683 | 9 |
| 22 | 5 006776 | 5 004575 | 5 001142 | 4 997347 | 4 994219 | 4 992663 | 8 |
| 23 | 5 006730 | 5 004477 | 5 001016 | 4 997226 | 4 994138 | 4 992646 | 7 |
| 24 | 5 006681 | 5 004377 | 5 000889 | 4 997106 | 4 994058 | 4 992631 | 6 |
| 25 | 5 006630 | 5 004275 | 5 000762 | 4 996987 | 4 993980 | 4 992618 | 5 |
| 26 | 5 006577 | 5 004173 | 5 000635 | 4 996868 | 4 993904 | 4 992607 | 4 |
| 27 | 5 006522 | 5 004069 | 5 000508 | 4 996750 | 4 993831 | 4 992599 | 3 |
| 28 | 5 006466 | 5 003963 | 5 000380 | 4 996634 | 4 993759 | 4 992593 | 2 |
| 29 | 5 006408 | 5 003857 | 5 000252 | 4 996519 | 4 993688 | 4 992590 | 1 |
| 30 | 5 006347 | 5 003749 | 5 000124 | 4 996405 | 4 993620 | 4 992589 | 0 |
| | Sig. XI. | Sig. X. | Sig. IX. | Sig. VIII. | Sig. VII. | Sig. VI. | Gr. |

## *EPOCHÆ MEDIARUM CONJUNCTIONUM LUNÆ CUM SOLE.*

*Annis Julianis ineuntibus.*

| *Annis Juliani ineuntibus.* | *Temp primæ Conj. Med. in Menf. Jan.* | | | | *Anomaliæ Mediæ Solis.* | | | | *Solis ab Apog. Lunæ Diſtantia.* | | | | *Solis à Nodo Lunæ Diſtantia* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D. | H. | M. | S. | S | ° | ′ | ″ | S | ° | ′ | ″ | S | ° | ′ | ″ |
| 1661 | 19 | 20 | 52 | 12 | 7 | 3 | 1 | 37 | 5 | 7 | 8 | 5 | 3 | 19 | 59 | 42 |
| 62 | 9 | 5 | 40 | 49 | 6 | 22 | 17 | 29 | 3 | 16 | 56 | 10 | 3 | 28 | 2 | 29 |
| 63 | 28 | 3 | 13 | 28 | 7 | 10 | 39 | 41 | 2 | 22 | 33 | 16 | 5 | 6 | 45 | 30 |
| 64 | 17 | 12 | 2 | 5 | 6 | 29 | 55 | 33 | 1 | 2 | 21 | 21 | 5 | 14 | 48 | 18 |
| 65 | 5 | 20 | 50 | 41 | 6 | 19 | 11 | 26 | 11 | 12 | 9 | 26 | 5 | 22 | 51 | 5 |
| 1666 | 24 | 18 | 23 | 21 | 7 | 7 | 33 | 37 | 10 | 17 | 46 | 32 | 7 | 1 | 34 | 6 |
| 67 | 14 | 3 | 11 | 58 | 6 | 26 | 49 | 30 | 8 | 27 | 34 | 37 | 7 | 9 | 36 | 53 |
| 68 | 3 | 12 | 0 | 34 | 6 | 16 | 5 | 22 | 7 | 7 | 22 | 42 | 7 | 17 | 39 | 40 |
| 69 | 21 | 9 | 33 | 14 | 7 | 4 | 27 | 33 | 6 | 12 | 59 | 48 | 8 | 26 | 22 | 42 |
| 70 | 10 | 18 | 21 | 51 | 6 | 23 | 43 | 26 | 4 | 22 | 47 | 53 | 9 | 4 | 25 | 28 |
| 1671 | 0 | 3 | 10 | 27 | 6 | 12 | 59 | 18 | 3 | 2 | 35 | 59 | 9 | 12 | 28 | 15 |
| 72 | 19 | 0 | 43 | 7 | 7 | 1 | 21 | 30 | 2 | 8 | 13 | 4 | 10 | 21 | 11 | 17 |
| 73 | 7 | 9 | 31 | 43 | 6 | 20 | 37 | 22 | 0 | 18 | 1 | 9 | 10 | 29 | 14 | 5 |
| 74 | 26 | 7 | 4 | 23 | 7 | 8 | 59 | 34 | 11 | 23 | 38 | 15 | 0 | 7 | 57 | 5 |
| 75 | 15 | 15 | 53 | 0 | 6 | 28 | 15 | 26 | 10 | 3 | 26 | 20 | 0 | 15 | 59 | 53 |
| 1676 | 5 | 0 | 41 | 36 | 6 | 17 | 31 | 19 | 8 | 13 | 14 | 25 | 0 | 24 | 2 | 39 |
| 77 | 22 | 22 | 14 | 16 | 7 | 5 | 53 | 30 | 7 | 18 | 51 | 31 | 2 | 2 | 45 | 41 |
| 78 | 12 | 7 | 2 | 53 | 6 | 25 | 9 | 22 | 5 | 28 | 39 | 36 | 2 | 10 | 48 | 28 |
| 79 | 1 | 15 | 51 | 29 | 6 | 14 | 25 | 15 | 4 | 8 | 27 | 42 | 2 | 18 | 51 | 15 |
| 80 | 20 | 13 | 24 | 9 | 7 | 2 | 47 | 26 | 3 | 14 | 4 | 47 | 3 | 27 | 34 | 17 |
| 1681 | 8 | 22 | 12 | 45 | 6 | 22 | 3 | 19 | 1 | 23 | 52 | 52 | 4 | 5 | 37 | 4 |
| 82 | 27 | 19 | 45 | 25 | 7 | 10 | 25 | 30 | 0 | 29 | 29 | 58 | 5 | 14 | 20 | 5 |
| 83 | 17 | 4 | 34 | 2 | 6 | 29 | 41 | 23 | 11 | 9 | 18 | 3 | 5 | 22 | 22 | 52 |
| 84 | 6 | 13 | 22 | 38 | 6 | 18 | 57 | 15 | 9 | 19 | 6 | 8 | 6 | 0 | 25 | 39 |
| 85 | 24 | 10 | 55 | 17 | 7 | 7 | 19 | 27 | 8 | 24 | 43 | 14 | 7 | 9 | 8 | 41 |
| 1686 | 13 | 19 | 43 | 55 | 6 | 26 | 35 | 18 | 7 | 4 | 31 | 19 | 7 | 17 | 11 | 27 |
| 87 | 3 | 4 | 32 | 31 | 6 | 15 | 51 | 11 | 5 | 14 | 19 | 25 | 7 | 25 | 14 | 14 |
| 88 | 22 | 2 | 5 | 11 | 7 | 4 | 13 | 22 | 4 | 19 | 56 | 30 | 9 | 3 | 57 | 16 |
| 89 | 10 | 10 | 53 | 47 | 6 | 23 | 29 | 14 | 2 | 29 | 44 | 35 | 9 | 12 | 0 | 4 |
| 90 | 29 | 8 | 26 | 27 | 7 | 11 | 51 | 26 | 2 | 5 | 21 | 41 | 10 | 20 | 43 | 4 |
| 1691 | 18 | 17 | 15 | 4 | 7 | 1 | 7 | 19 | 0 | 15 | 9 | 46 | 10 | 28 | 45 | 51 |
| 92 | 8 | 2 | 3 | 40 | 6 | 20 | 23 | 11 | 10 | 24 | 57 | 51 | 11 | 6 | 48 | 38 |
| 93 | 25 | 23 | 36 | 19 | 7 | 8 | 45 | 24 | 10 | 0 | 34 | 57 | 0 | 15 | 31 | 40 |
| 94 | 15 | 8 | 24 | 57 | 6 | 28 | 1 | 14 | 8 | 10 | 23 | 2 | 0 | 23 | 34 | 27 |
| 1695 | 4 | 17 | 13 | 33 | 6 | 17 | 17 | 6 | 6 | 20 | 11 | 8 | 1 | 1 | 37 | 14 |

## EPOCHÆ MEDIARUM CONJUNCTIONUM LUNÆ CUM SOLE.

*Annis Julianis ineuntibus.*

| *Annis Julianis ineuntibus.* | *Temp. primæ Conj. Med. in Menſ. Jan.* | | | | *Anomaliæ Media Solis.* | | | | *Solis ab Apog. Lunæ Diſtantia.* | | | | *Solis à Nodo Lunæ Diſtantia.* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D. | H. | M. | S. | S | ° | ′ | ″ | S | ° | ′ | ″ | S | ° | ′ | ″ |
| 1696 | 23 | 14 | 46 | 13 | 7 | 5 | 39 | 18 | 5 | 25 | 48 | 13 | 2 | 10 | 20 | 16 |
| 97 | 11 | 23 | 34 | 49 | 6 | 24 | 55 | 10 | 4 | 5 | 36 | 18 | 2 | 18 | 23 | 3 |
| 98 | 1 | 8 | 23 | 26 | 6 | 14 | 11 | 2 | 2 | 15 | 24 | 24 | 2 | 26 | 25 | 50 |
| 99 | 20 | 5 | 56 | 6 | 7 | 2 | 33 | 14 | 1 | 21 | 1 | 29 | 4 | 5 | 8 | 51 |
| 1700 | 9 | 14 | 44 | 42 | 6 | 21 | 49 | 7 | 0 | 0 | 49 | 34 | 4 | 13 | 11 | 37 |
| 1701 | 27 | 12 | 17 | 21 | 7 | 10 | 11 | 20 | 11 | 6 | 26 | 41 | 5 | 21 | 54 | 40 |
| 2 | 16 | 21 | 5 | 58 | 6 | 29 | 27 | 12 | 9 | 16 | 14 | 46 | 5 | 29 | 57 | 27 |
| 3 | 6 | 5 | 54 | 34 | 6 | 18 | 43 | 4 | 7 | 26 | 2 | 51 | 6 | 8 | 0 | 14 |
| 4 | 25 | 3 | 27 | 14 | 7 | 7 | 5 | 16 | 7 | 1 | 39 | 57 | 7 | 16 | 43 | 15 |
| 5 | 13 | 12 | 15 | 51 | 6 | 26 | 21 | 8 | 5 | 11 | 28 | 2 | 7 | 24 | 46 | 2 |
| 1706 | 2 | 21 | 4 | 27 | 6 | 15 | 37 | 0 | 3 | 21 | 16 | 7 | 8 | 2 | 48 | 49 |
| 7 | 21 | 18 | 37 | 7 | 7 | 3 | 59 | 12 | 2 | 26 | 53 | 13 | 9 | 11 | 31 | 50 |
| 8 | 11 | 3 | 25 | 44 | 6 | 23 | 15 | 4 | 1 | 6 | 41 | 18 | 9 | 19 | 34 | 37 |
| 9 | 29 | 0 | 53 | 23 | 7 | 11 | 37 | 16 | 0 | 12 | 18 | 24 | 10 | 28 | 17 | 39 |
| 10 | 18 | 9 | 47 | 0 | 7 | 0 | 53 | 8 | 10 | 22 | 6 | 29 | 11 | 6 | 20 | 26 |
| 1711 | 7 | 18 | 35 | 36 | 6 | 20 | 9 | 1 | 9 | 1 | 54 | 34 | 11 | 14 | 23 | 14 |
| 12 | 26 | 16 | 8 | 16 | 7 | 8 | 31 | 12 | 8 | 7 | 31 | 40 | 0 | 23 | 6 | 15 |
| 13 | 15 | 0 | 56 | 53 | 6 | 27 | 47 | 5 | 6 | 17 | 19 | 45 | 1 | 1 | 9 | 1 |
| 14 | 4 | 9 | 45 | 29 | 6 | 17 | 2 | 56 | 4 | 27 | 7 | 50 | 1 | 9 | 11 | 49 |
| 15 | 23 | 7 | 18 | 9 | 7 | 5 | 25 | 9 | 4 | 2 | 44 | 56 | 2 | 17 | 54 | 49 |
| 1716 | 12 | 16 | 6 | 46 | 6 | 24 | 41 | 0 | 2 | 12 | 33 | 1 | 2 | 25 | 57 | 37 |
| 17 | 1 | 0 | 55 | 22 | 6 | 13 | 56 | 54 | 0 | 22 | 21 | 6 | 3 | 4 | 0 | 25 |
| 18 | 19 | 22 | 28 | 2 | 7 | 2 | 19 | 6 | 11 | 27 | 58 | 12 | 4 | 12 | 43 | 25 |
| 19 | 9 | 7 | 16 | 38 | 6 | 21 | 34 | 58 | 10 | 7 | 46 | 17 | 4 | 20 | 46 | 13 |
| 20 | 28 | 4 | 49 | 18 | 7 | 9 | 57 | 10 | 9 | 13 | 23 | 23 | 5 | 29 | 29 | 14 |
| 1721 | 16 | 13 | 37 | 54 | 6 | 29 | 13 | 2 | 7 | 23 | 11 | 28 | 6 | 7 | 32 | 2 |
| 22 | 5 | 22 | 26 | 31 | 6 | 18 | 28 | 54 | 6 | 2 | 59 | 33 | 6 | 15 | 34 | 48 |
| 23 | 24 | 19 | 59 | 11 | 7 | 6 | 51 | 6 | 5 | 8 | 36 | 39 | 7 | 24 | 17 | 49 |
| 24 | 14 | 4 | 47 | 48 | 6 | 26 | 6 | 58 | 3 | 18 | 24 | 44 | 8 | 2 | 20 | 36 |
| 25 | 2 | 13 | 36 | 24 | 6 | 15 | 22 | 50 | 1 | 28 | 12 | 49 | 8 | 10 | 23 | 25 |
| 1726 | 21 | 11 | 9 | 4 | 7 | 3 | 45 | 2 | 1 | 3 | 49 | 55 | 9 | 19 | 6 | 25 |
| 27 | 10 | 19 | 57 | 40 | 6 | 23 | 0 | 55 | 11 | 13 | 38 | 0 | 9 | 27 | 9 | 12 |
| 28 | 0 | 4 | 46 | 17 | 6 | 12 | 16 | 47 | 9 | 23 | 26 | 6 | 10 | 5 | 11 | 59 |
| 29 | 18 | 2 | 18 | 57 | 7 | 0 | 38 | 59 | 8 | 29 | 3 | 11 | 11 | 13 | 55 | 1 |
| 1730 | 7 | 11 | 7 | 33 | 6 | 19 | 54 | 50 | 7 | 8 | 51 | 16 | 11 | 21 | 57 | 47 |

# EPOCHÆ MEDIARUM CONJUNCTIONUM LUNÆ CUM SOLE.

## Annis Julianis ineuntibus.

| Annis Julianis ineuntibus. | Temp. primæ Conj. Med. in Mens. Jan. | | | | Anomaliæ Mediæ Solis. | | | | Solis ab Apog. Lunæ Distantia. | | | | Solis à Nodo Lunæ Distantia. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D. | H. | ′ | ″ | S | ° | ′ | ″ | S | ° | ′ | ″ | S | ° | ′ | ″ |
| 1731 | 26 | 8 | 40 | 13 | 7 | 8 | 17 | 3 | 6 | 14 | 28 | 22 | 1 | 0 | 40 | 49 |
| 32 | 15 | 17 | 28 | 50 | 6 | 27 | 32 | 54 | 4 | 24 | 16 | 27 | 1 | 8 | 43 | 36 |
| 33 | 4 | 2 | 17 | 26 | 6 | 16 | 48 | 47 | 3 | 4 | 4 | 32 | 1 | 16 | 46 | 24 |
| 34 | 22 | 23 | 50 | 6 | 7 | 5 | 10 | 59 | 2 | 9 | 41 | 38 | 2 | 25 | 29 | 25 |
| 35 | 12 | 8 | 38 | 43 | 6 | 24 | 26 | 51 | 0 | 19 | 29 | 43 | 3 | 3 | 32 | 12 |
| 1736 | 1 | 17 | 27 | 19 | 6 | 13 | 42 | 43 | 10 | 29 | 17 | 48 | 3 | 11 | 34 | 59 |
| 37 | 19 | 14 | 59 | 58 | 7 | 2 | 4 | 55 | 10 | 4 | 54 | 54 | 4 | 20 | 18 | 1 |
| 38 | 8 | 23 | 48 | 35 | 6 | 21 | 20 | 47 | 8 | 14 | 42 | 59 | 4 | 28 | 20 | 48 |
| 39 | 27 | 21 | 21 | 15 | 7 | 9 | 42 | 59 | 7 | 20 | 20 | 5 | 6 | 7 | 3 | 49 |
| 40 | 17 | 6 | 9 | 52 | 6 | 28 | 58 | 51 | 6 | 0 | 8 | 10 | 6 | 15 | 6 | 36 |
| 1741 | 5 | 14 | 58 | 28 | 6 | 18 | 14 | 44 | 4 | 9 | 56 | 16 | 6 | 23 | 9 | 24 |
| 42 | 24 | 12 | 31 | 8 | 7 | 6 | 36 | 56 | 3 | 15 | 33 | 21 | 8 | 1 | 52 | 25 |
| 43 | 13 | 21 | 19 | 45 | 6 | 25 | 52 | 48 | 1 | 25 | 21 | 26 | 8 | 9 | 55 | 12 |
| 44 | 3 | 6 | 8 | 22 | 6 | 15 | 8 | 40 | 0 | 5 | 9 | 31 | 8 | 17 | 58 | 0 |
| 45 | 21 | 3 | 41 | 00 | 7 | 3 | 30 | 52 | 11 | 10 | 46 | 37 | 9 | 26 | 41 | 1 |
| 1746 | 10 | 12 | 29 | 37 | 6 | 22 | 46 | 44 | 9 | 20 | 34 | 42 | 10 | 4 | 43 | 48 |
| 47 | 29 | 10 | 2 | 17 | 7 | 11 | 8 | 56 | 8 | 26 | 11 | 48 | 11 | 13 | 26 | 49 |
| 48 | 18 | 18 | 50 | 54 | 7 | 0 | 24 | 48 | 7 | 5 | 59 | 53 | 11 | 21 | 29 | 36 |
| 49 | 7 | 3 | 39 | 30 | 6 | 19 | 40 | 40 | 5 | 15 | 47 | 58 | 11 | 29 | 32 | 23 |
| 50 | 26 | 1 | 12 | 10 | 7 | 8 | 2 | 52 | 4 | 21 | 25 | 4 | 1 | 8 | 15 | 24 |
| 1751 | 15 | 10 | 0 | 47 | 6 | 27 | 18 | 44 | 3 | 1 | 13 | 9 | 1 | 16 | 18 | 11 |
| 52 | 4 | 18 | 49 | 24 | 6 | 16 | 34 | 36 | 1 | 11 | 1 | 14 | 1 | 24 | 20 | 58 |
| 53 | 22 | 16 | 22 | 2 | 7 | 4 | 56 | 48 | 0 | 16 | 38 | 20 | 3 | 3 | 4 | 0 |
| 54 | 12 | 1 | 10 | 38 | 6 | 24 | 12 | 40 | 10 | 26 | 26 | 25 | 3 | 11 | 6 | 47 |
| 55 | 1 | 9 | 59 | 15 | 6 | 13 | 28 | 32 | 9 | 6 | 14 | 30 | 3 | 19 | 9 | 34 |
| 1756 | 20 | 7 | 31 | 55 | 7 | 1 | 50 | 44 | 8 | 11 | 51 | 36 | 4 | 27 | 52 | 35 |
| 57 | 8 | 16 | 20 | 32 | 6 | 21 | 6 | 37 | 6 | 21 | 39 | 42 | 5 | 5 | 55 | 23 |
| 58 | 27 | 13 | 53 | 12 | 7 | 9 | 28 | 49 | 5 | 27 | 16 | 48 | 6 | 14 | 38 | 24 |
| 59 | 16 | 22 | 41 | 48 | 6 | 28 | 44 | 41 | 4 | 7 | 4 | 53 | 6 | 22 | 41 | 11 |
| 60 | 6 | 7 | 30 | 25 | 6 | 18 | 0 | 33 | 2 | 16 | 52 | 58 | 7 | 0 | 43 | 58 |
| 1761 | 24 | 5 | 3 | 4 | 7 | 6 | 22 | 45 | 1 | 22 | 30 | 4 | 8 | 9 | 26 | 59 |
| 62 | 13 | 13 | 51 | 41 | 6 | 25 | 38 | 37 | 0 | 2 | 18 | 8 | 8 | 17 | 29 | 46 |
| 63 | 2 | 22 | 40 | 17 | 6 | 14 | 54 | 29 | 10 | 12 | 6 | 13 | 8 | 25 | 32 | 33 |
| 64 | 21 | 20 | 12 | 57 | 7 | 3 | 16 | 41 | 9 | 17 | 43 | 19 | 10 | 4 | 15 | 34 |
| 1765 | 10 | 5 | 1 | 33 | 6 | 22 | 32 | 34 | 7 | 27 | 31 | 25 | 10 | 12 | 18 | 22 |

## EPOCHÆ MEDIARUM CONJUNCTIONUM LUNÆ CUM SOLE.

*Annis Julianis ineuntibus.*

| *Annis Julianis ineuntibus.* | *Temp. primæ Conj. Med. in Mens. Jan.* | | | | *Anomaliæ Media Solis.* | | | | *Solis ab Apog. Lunæ Distantia.* | | | | *Solis à Nodo Lunæ Distantia.* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D. | H. | ′ | ″ | S | ° | ′ | ″ | S | ° | ′ | ″ | S | ° | ′ | ″ |
| 1766 | 29 | 2 | 34 | 14 | 7 | 10 | 54 | 46 | 7 | 3 | 8 | 31 | 11 | 21 | 1 | 24 |
| 67 | 18 | 11 | 22 | 50 | 7 | 0 | 10 | 38 | 5 | 12 | 56 | 36 | 11 | 29 | 4 | 11 |
| 68 | 7 | 20 | 11 | 27 | 6 | 19 | 26 | 30 | 3 | 22 | 44 | 41 | 0 | 7 | 6 | 58 |
| 69 | 25 | 17 | 44 | 6 | 7 | 7 | 48 | 41 | 2 | 28 | 21 | 47 | 1 | 15 | 49 | 59 |
| 70 | 15 | 2 | 32 | 42 | 6 | 27 | 4 | 33 | 1 | 8 | 9 | 52 | 1 | 23 | 52 | 46 |
| 1771 | 4 | 11 | 21 | 19 | 6 | 16 | 20 | 25 | 11 | 17 | 57 | 57 | 2 | 1 | 55 | 33 |
| 72 | 23 | 8 | 53 | 59 | 7 | 4 | 42 | 37 | 10 | 23 | 35 | 3 | 3 | 10 | 38 | 34 |
| 73 | 11 | 17 | 42 | 35 | 6 | 23 | 58 | 30 | 9 | 3 | 23 | 8 | 3 | 18 | 41 | 22 |
| 74 | 1 | 2 | 31 | 12 | 6 | 13 | 14 | 23 | 7 | 13 | 11 | 13 | 3 | 26 | 44 | 10 |
| 75 | 20 | 0 | 3 | 52 | 7 | 1 | 36 | 35 | 6 | 18 | 48 | 19 | 5 | 5 | 27 | 11 |
| 1776 | 9 | 8 | 52 | 28 | 6 | 20 | 52 | 27 | 4 | 28 | 36 | 24 | 5 | 13 | 29 | 48 |
| 77 | 27 | 6 | 25 | 8 | 7 | 9 | 14 | 38 | 4 | 4 | 13 | 30 | 6 | 22 | 12 | 59 |
| 78 | 16 | 15 | 13 | 44 | 6 | 28 | 30 | 30 | 2 | 14 | 1 | 35 | 7 | 0 | 15 | 46 |
| 79 | 6 | 0 | 2 | 21 | 6 | 17 | 46 | 22 | 0 | 23 | 49 | 40 | 7 | 8 | 18 | 33 |
| 80 | 24 | 21 | 35 | 0 | 7 | 6 | 8 | 34 | 11 | 29 | 26 | 46 | 8 | 17 | 1 | 34 |
| 1781 | 13 | 6 | 23 | 37 | 6 | 25 | 24 | 27 | 10 | 9 | 14 | 51 | 8 | 25 | 4 | 21 |
| 82 | 2 | 15 | 12 | 14 | 6 | 14 | 40 | 18 | 8 | 19 | 2 | 55 | 9 | 3 | 7 | 8 |
| 83 | 21 | 12 | 44 | 54 | 7 | 3 | 2 | 30 | 7 | 24 | 40 | 1 | 10 | 11 | 50 | 9 |
| 84 | 10 | 21 | 33 | 31 | 6 | 22 | 18 | 22 | 6 | 4 | 28 | 6 | 10 | 19 | 52 | 56 |
| 85 | 28 | 19 | 6 | 10 | 7 | 10 | 40 | 35 | 5 | 10 | 5 | 12 | 11 | 28 | 35 | 58 |
| 1786 | 18 | 3 | 54 | 47 | 6 | 29 | 56 | 27 | 3 | 19 | 53 | 17 | 0 | 6 | 38 | 45 |
| 87 | 7 | 12 | 43 | 23 | 6 | 19 | 12 | 19 | 1 | 29 | 41 | 23 | 0 | 14 | 41 | 32 |
| 88 | 26 | 10 | 16 | 3 | 7 | 7 | 34 | 31 | 1 | 5 | 18 | 28 | 1 | 23 | 24 | 34 |
| 89 | 14 | 19 | 4 | 39 | 6 | 26 | 50 | 23 | 11 | 15 | 6 | 34 | 2 | 1 | 27 | 21 |
| 90 | 4 | 3 | 53 | 16 | 6 | 16 | 6 | 15 | 9 | 24 | 54 | 39 | 2 | 9 | 30 | 8 |
| 1791 | 23 | 1 | 25 | 56 | 7 | 4 | 28 | 27 | 9 | 0 | 31 | 44 | 3 | 18 | 13 | 10 |
| 92 | 12 | 10 | 14 | 33 | 6 | 23 | 44 | 19 | 7 | 10 | 19 | 50 | 3 | 26 | 15 | 57 |
| 93 | 0 | 19 | 3 | 9 | 6 | 13 | 0 | 12 | 5 | 20 | 7 | 55 | 4 | 4 | 18 | 45 |
| 94 | 19 | 16 | 35 | 49 | 7 | 1 | 22 | 24 | 4 | 25 | 45 | 0 | 5 | 13 | 1 | 46 |
| 95 | 9 | 1 | 24 | 25 | 6 | 20 | 38 | 16 | 3 | 5 | 33 | 6 | 5 | 21 | 4 | 33 |
| 1796 | 27 | 22 | 57 | 5 | 7 | 9 | 0 | 28 | 2 | 11 | 10 | 11 | 6 | 29 | 47 | 34 |
| 97 | 16 | 7 | 45 | 41 | 6 | 28 | 16 | 19 | 0 | 20 | 58 | 17 | 7 | 7 | 50 | 21 |
| 98 | 5 | 16 | 34 | 18 | 6 | 17 | 32 | 11 | 11 | 0 | 46 | 22 | 7 | 15 | 53 | 8 |
| 99 | 24 | 14 | 6 | 57 | 7 | 5 | 54 | 23 | 10 | 6 | 23 | 28 | 8 | 24 | 36 | 10 |
| 1800 | 13 | 22 | 55 | 34 | 6 | 25 | 10 | 15 | 8 | 16 | 11 | 33 | 9 | 2 | 38 | 57 |

## *REVOLUTIONES LUNÆ AD SOLEM IN MENSIBUS ANNI COMMUNIS.*

| *Dier. Coll.* | | | | | | *Anomalia Media Solis.* | | | | *Solis ab Apog. Lunæ Distantia.* | | | | *Solis à Nodo Lunæ Distantia.* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | D. | H. | M. | S | S | ° | ′ | ″ | S | ° | ′ | ″ | S | ° | ′ | ″ |
| 29 | Januarii | 29 | 12 | 44 | 3 | 0 | 29 | 6 | 19 | 0 | 25 | 49 | 0 | 1 | 0 | 40 | 14 |
| 59 | Februarii | 28 | 1 | 28 | 6 | 1 | 28 | 12 | 39 | 1 | 21 | 38 | 1 | 2 | 1 | 20 | 28 |
| 88 | Martii | 29 | 14 | 12 | 9 | 2 | 27 | 18 | 58 | 2 | 17 | 27 | 1 | 3 | 2 | 0 | 42 |
| 118 | Aprilis | 28 | 2 | 56 | 12 | 3 | 26 | 25 | 17 | 3 | 13 | 16 | 2 | 4 | 2 | 40 | 56 |
| 147 | Maii | 27 | 15 | 40 | 15 | 4 | 25 | 31 | 37 | 4 | 9 | 5 | 2 | 5 | 3 | 21 | 10 |
| 177 | Junii | 26 | 4 | 24 | 18 | 5 | 24 | 37 | 56 | 5 | 4 | 54 | 3 | 6 | 4 | 1 | 24 |
| 206 | Julii | 25 | 17 | 8 | 21 | 6 | 23 | 44 | 15 | 6 | 0 | 43 | 3 | 7 | 4 | 41 | 38 |
| 236 | Augusti | 24 | 5 | 52 | 24 | 7 | 22 | 50 | 35 | 6 | 26 | 32 | 3 | 8 | 5 | 21 | 51 |
| 265 | Septembris | 22 | 18 | 36 | 27 | 8 | 21 | 56 | 54 | 7 | 22 | 21 | 4 | 9 | 6 | 2 | 5 |
| 295 | Octobris | 22 | 7 | 20 | 30 | 9 | 21 | 3 | 14 | 8 | 18 | 10 | 4 | 10 | 6 | 42 | 19 |
| 324 | Novembris | 20 | 20 | 4 | 34 | 10 | 20 | 9 | 33 | 9 | 13 | 59 | 5 | 11 | 7 | 22 | 33 |
| 354 | Decembris | 20 | 8 | 48 | 37 | 11 | 19 | 15 | 52 | 10 | 9 | 48 | 5 | 0 | 8 | 2 | 47 |
| | $\frac{1}{2}$ Menf. Synod. | 14 | 18 | 22 | 2 | 0 | 14 | 33 | 10 | 0 | 12 | 54 | 30 | 0 | 15 | 20 | 7 |

In Anno Biſſextili poſt Februarium deme diem de dierum numero in Tabellâ, motus verò medii non mutentur.

## *MOTUS MEDII LUNÆ A SOLE AD HORAS*, &c.

| S. M. H. | *Mot. M.* ☽ à ☉ ″ | ‴ | S. M. | *Mot. M.* ☽ à ☉ ′ | ″ | ‴ |
|---|---|---|---|---|---|---|
| | ′ | ″ | | ° | ′ | ″ |
| | ° | ′ | | | | |
| 1 | 0 | 30 29 | 31 | 0 | 15 45 | |
| 2 | 1 | 0 57 | 32 | 0 | 16 15 | |
| 3 | 1 | 31 26 | 33 | 0 | 16 46 | |
| 4 | 2 | 1 54 | 34 | 0 | 17 16 | |
| 5 | 2 | 32 23 | 35 | 0 | 17 47 | |
| 6 | 3 | 2 52 | 36 | 0 | 18 17 | |
| 7 | 3 | 33 20 | 37 | 0 | 18 48 | |
| 8 | 4 | 3 49 | 38 | 0 | 19 18 | |
| 9 | 4 | 34 17 | 39 | 0 | 19 49 | |
| 10 | 5 | 4 46 | 40 | 0 | 20 19 | |
| 11 | 5 | 35 15 | 41 | 0 | 20 50 | |
| 12 | 6 | 5 43 | 42 | 0 | 21 20 | |
| 13 | 6 | 36 12 | 43 | 0 | 21 50 | |
| 14 | 7 | 6 41 | 44 | 0 | 22 21 | |
| 15 | 7 | 37 9 | 45 | 0 | 22 51 | |
| 16 | 8 | 7 38 | 46 | 0 | 23 22 | |
| 17 | 8 | 38 6 | 47 | 0 | 23 52 | |
| 18 | 9 | 8 35 | 48 | 0 | 24 23 | |
| 19 | 9 | 39 4 | 49 | 0 | 24 53 | |
| 20 | 10 | 9 32 | 50 | 0 | 25 24 | |
| 21 | 10 | 40 1 | 51 | 0 | 25 54 | |
| 22 | 11 | 10 29 | 52 | 0 | 26 25 | |
| 23 | 11 | 40 58 | 53 | 0 | 26 55 | |
| 24 | 12 | 11 27 | 54 | 0 | 27 26 | |
| 25 | 12 | 41 55 | 55 | 0 | 27 56 | |
| 26 | 13 | 12 24 | 56 | 0 | 28 27 | |
| 27 | 13 | 42 53 | 57 | 0 | 28 57 | |
| 28 | 14 | 13 21 | 58 | 0 | 29 28 | |
| 29 | 14 | 43 50 | 59 | 0 | 29 58 | |
| 30 | 15 | 14 18 | 60 | 0 | 30 29 | |

## *REVOLUTIONES LUNÆ AD SOLEM IN ANNORUM CENTURIIS.*

| *Menses Synodici.* | *Anni Juliani.* | *Temp. primæ Conj. post Cent. completum.* | | | | *Anomalia Media Solis.* | | | | *Solis ab Apog. Lunæ Distantia.* | | | | *Solis à Nodo Lunæ Distantia.* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | D. | H. | M. | S | S | ° | ′ | ″ | S | ° | ′ | ″ | S | ° | ′ | ″ |
| 1237 | 100 | 4 | 8 | 10 | 52 | 0 | 3 | 21 | 7 | 8 | 15 | 21 | 59 | 4 | 19 | 27 | 17 |
| 2474 | 200 | 8 | 16 | 21 | 45 | 0 | 6 | 42 | 15 | 5 | 0 | 43 | 58 | 9 | 8 | 54 | 35 |
| 3711 | 300 | 13 | 0 | 32 | 37 | 0 | 10 | 3 | 22 | 1 | 16 | 5 | 57 | 1 | 28 | 21 | 52 |
| 4948 | 400 | 17 | 8 | 43 | 29 | 0 | 13 | 24 | 30 | 10 | 1 | 27 | 56 | 6 | 17 | 49 | 10 |
| 6185 | 500 | 21 | 16 | 54 | 22 | 0 | 16 | 45 | 37 | 6 | 16 | 49 | 54 | 11 | 7 | 16 | 27 |
| 7422 | 600 | 26 | 1 | 5 | 14 | 0 | 20 | 6 | 45 | 3 | 2 | 11 | 53 | 3 | 26 | 43 | 45 |
| 8658 | 700 | 0 | 20 | 32 | 3 | 11 | 24 | 21 | 33 | 10 | 21 | 44 | 52 | 7 | 15 | 30 | 48 |
| 9895 | 800 | 5 | 4 | 42 | 56 | 11 | 27 | 42 | 41 | 7 | 7 | 6 | 51 | 0 | 4 | 58 | 6 |
| 11132 | 900 | 9 | 12 | 53 | 48 | 0 | 1 | 3 | 48 | 3 | 22 | 28 | 50 | 4 | 24 | 25 | 23 |
| 12369 | 1000 | 13 | 21 | 4 | 40 | 0 | 4 | 24 | 56 | 0 | 7 | 50 | 49 | 9 | 13 | 52 | 40 |
| 13606 | 1100 | 18 | 5 | 15 | 33 | 0 | 7 | 46 | 3 | 8 | 23 | 12 | 48 | 2 | 3 | 19 | 58 |
| 14843 | 1200 | 22 | 13 | 26 | 25 | 0 | 11 | 7 | 11 | 5 | 8 | 34 | 47 | 6 | 22 | 47 | 15 |
| 16080 | 1300 | 26 | 21 | 37 | 17 | 0 | 14 | 28 | 18 | 1 | 23 | 56 | 46 | 11 | 12 | 14 | 33 |
| 17316 | 1400 | 1 | 17 | 4 | 6 | 11 | 18 | 43 | 6 | 9 | 13 | 29 | 44 | 3 | 1 | 1 | 36 |
| 18553 | 1500 | 6 | 1 | 14 | 59 | 11 | 22 | 4 | 14 | 5 | 28 | 51 | 43 | 7 | 20 | 28 | 54 |
| 19790 | 1600 | 10 | 9 | 25 | 51 | 11 | 25 | 25 | 21 | 2 | 14 | 13 | 42 | 0 | 9 | 56 | 11 |
| 21027 | 1700 | 14 | 17 | 36 | 44 | 11 | 28 | 46 | 29 | 10 | 29 | 35 | 41 | 4 | 29 | 23 | 28 |
| 22264 | 1800 | 19 | 1 | 47 | 36 | 0 | 2 | 7 | 36 | 7 | 14 | 57 | 40 | 9 | 18 | 50 | 46 |
| 23501 | 1900 | 23 | 9 | 58 | 28 | 0 | 5 | 28 | 44 | 4 | 0 | 19 | 39 | 2 | 8 | 18 | 3 |
| 24738 | 2000 | 27 | 18 | 9 | 21 | 0 | 8 | 49 | 51 | 0 | 15 | 41 | 38 | 6 | 27 | 45 | 21 |
| 25974 | 2100 | 2 | 13 | 36 | 10 | 11 | 13 | 4 | 39 | 8 | 5 | 14 | 35 | 10 | 16 | 32 | 24 |
| 27211 | 2200 | 6 | 21 | 47 | 2 | 11 | 16 | 25 | 46 | 4 | 20 | 36 | 34 | 3 | 5 | 59 | 41 |
| 28448 | 2300 | 11 | 5 | 57 | 54 | 11 | 19 | 46 | 54 | 1 | 5 | 58 | 33 | 7 | 25 | 26 | 59 |
| 29685 | 2400 | 15 | 14 | 8 | 47 | 11 | 23 | 8 | 1 | 9 | 21 | 20 | 32 | 0 | 14 | 54 | 16 |
| 30922 | 2500 | 19 | 22 | 19 | 39 | 11 | 26 | 29 | 9 | 6 | 6 | 42 | 31 | 5 | 4 | 21 | 34 |
| 32159 | 2600 | 24 | 6 | 30 | 31 | 11 | 29 | 50 | 16 | 2 | 22 | 4 | 29 | 9 | 23 | 48 | 51 |
| 33396 | 2700 | 28 | 14 | 41 | 24 | 0 | 3 | 11 | 24 | 11 | 7 | 26 | 28 | 2 | 13 | 16 | 9 |
| 34632 | 2800 | 3 | 10 | 8 | 13 | 11 | 7 | 26 | 12 | 6 | 26 | 59 | 27 | 6 | 2 | 3 | 12 |
| 35869 | 2900 | 7 | 18 | 19 | 5 | 11 | 10 | 47 | 19 | 3 | 12 | 21 | 26 | 10 | 21 | 30 | 29 |
| 37106 | 3000 | 12 | 2 | 29 | 57 | 11 | 14 | 8 | 27 | 11 | 27 | 43 | 25 | 3 | 10 | 57 | 47 |
| 38343 | 3100 | 16 | 10 | 40 | 50 | 11 | 17 | 29 | 34 | 8 | 13 | 5 | 24 | 8 | 0 | 25 | 4 |
| 39580 | 3200 | 20 | 18 | 51 | 42 | 11 | 20 | 50 | 42 | 4 | 28 | 27 | 23 | 0 | 19 | 52 | 22 |
| 40817 | 3300 | 25 | 3 | 2 | 35 | 11 | 24 | 11 | 50 | 1 | 13 | 49 | 23 | 5 | 9 | 19 | 39 |

# PERIODI LUNARES.

| *Menses Synodici.* | *Periodi in Annis Jul. diebus & diei partibus.* | | | | | *Anomalia Media Solis.* | | | | *Solis ab Apog. Lunæ Distantia.* | | | | *Solis à Nodo Lunæ Distantia.* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ann. | D. | H. | M. | S. | S | ° | ′ | ″ | S | ° | ′ | ″ | S | ° | ′ | ″ |
| 111 | 8 | 355 | 21 | 29 | 38 | 11 | 20 | 41 | 49 | 11 | 15 | 39 | 48 | 5 | 14 | 25 | 47 |
| 223 | 18 | 11 | 7 | 43 | 20 | 0 | 10 | 29 | 57 | 11 | 27 | 8 | 37 | 11 | 29 | 31 | 48 |
| 235 | 19 | 0 | 16 | 31 | 56 | 11 | 29 | 45 | 49 | 10 | 6 | 56 | 42 | 0 | 7 | 34 | 35 |
| 251 | 20 | 107 | 4 | 16 | 45 | 3 | 15 | 26 | 59 | 0 | 0 | 0 | 49 | 4 | 18 | 18 | 18 |
| 270 | 21 | 303 | 6 | 13 | 43 | 9 | 28 | 17 | 7 | 4 | 10 | 31 | 58 | 0 | 1 | 2 | 42 |
| 364 | 29 | 157 | 3 | 14 | 30 | 5 | 4 | 21 | 27 | 1 | 7 | 18 | 39 | 0 | 4 | 4 | 32 |
| 446 | 36 | 21 | 15 | 26 | 40 | 0 | 20 | 59 | 54 | 11 | 24 | 17 | 14 | 11 | 29 | 3 | 35 |
| 534 | 43 | 64 | 8 | 3 | 8 | 2 | 2 | 16 | 18 | 3 | 15 | 9 | 53 | 5 | 28 | 4 | 2 |
| 587 | 47 | 168 | 10 | 57 | 50 | 5 | 14 | 51 | 24 | 1 | 4 | 27 | 15 | 0 | 3 | 36 | 19 |
| 669 | 54 | 32 | 23 | 10 | 0 | 1 | 1 | 29 | 51 | 11 | 21 | 25 | 51 | 11 | 28 | 35 | 23 |
| 767 | 62 | 4 | 23 | 6 | 59 | 0 | 3 | 49 | 29 | 0 | 1 | 28 | 34 | 4 | 4 | 18 | 8 |
| 810 | 65 | 178 | 18 | 41 | 10 | 5 | 25 | 21 | 21 | 1 | 1 | 35 | 53 | 0 | 3 | 8 | 7 |
| 892 | 72 | 43 | 6 | 53 | 20 | 1 | 11 | 59 | 48 | 11 | 18 | 34 | 28 | 11 | 28 | 7 | 10 |
| 980 | 79 | 85 | 23 | 29 | 49 | 2 | 23 | 16 | 12 | 3 | 10 | 27 | 8 | 5 | 27 | 7 | 36 |
| 1115 | 90 | 54 | 14 | 36 | 40 | 1 | 22 | 29 | 45 | 11 | 15 | 43 | 5 | 11 | 27 | 38 | 58 |
| 1203 | 97 | 96 | 7 | 13 | 9 | 3 | 3 | 46 | 10 | 3 | 7 | 35 | 43 | 5 | 26 | 39 | 24 |
| 1338 | 108 | 65 | 22 | 20 | 0 | 2 | 2 | 59 | 42 | 11 | 12 | 51 | 42 | 11 | 27 | 10 | 45 |
| 2148 | 173 | 243 | 17 | 1 | 10 | 7 | 28 | 21 | 4 | 0 | 14 | 27 | 36 | 0 | 0 | 18 | 52 |
| 2301 | 186 | 13 | 21 | 20 | 57 | 0 | 11 | 28 | 26 | 0 | 4 | 25 | 43 | 0 | 12 | 54 | 25 |
| 2371 | 191 | 255 | 0 | 44 | 31 | 8 | 8 | 51 | 1 | 0 | 11 | 36 | 13 | 11 | 29 | 50 | 39 |
| 2641 | 213 | 192 | 6 | 58 | 14 | 6 | 7 | 18 | 8 | 4 | 22 | 8 | 10 | 0 | 0 | 53 | 22 |
| 2817 | 227 | 276 | 16 | 11 | 11 | 8 | 29 | 50 | 55 | 0 | 5 | 53 | 28 | 11 | 28 | 54 | 14 |
| 3040 | 245 | 286 | 23 | 54 | 31 | 9 | 10 | 20 | 52 | 0 | 3 | 2 | 5 | 11 | 28 | 26 | 2 |
| 3621 | 292 | 277 | 6 | 28 | 3 | 9 | 0 | 34 | 20 | 8 | 2 | 35 | 17 | 5 | 28 | 0 | 58 |
| 3709 | 299 | 319 | 23 | 4 | 31 | 10 | 11 | 50 | 44 | 11 | 24 | 27 | 56 | 11 | 27 | 1 | 24 |
| 4267 | 344 | 361 | 0 | 44 | 53 | 11 | 22 | 38 | 46 | 0 | 0 | 13 | 59 | 6 | 11 | 11 | 0 |
| 4601 | 371 | 363 | 5 | 57 | 51 | 11 | 23 | 50 | 32 | 11 | 13 | 2 | 24 | 11 | 25 | 8 | 34 |
| 5059 | 409 | 8 | 6 | 13 | 8 | 0 | 4 | 6 | 19 | 9 | 17 | 7 | 44 | 0 | 2 | 14 | 56 |
| 5458 | 441 | 102 | 23 | 9 | 25 | 3 | 7 | 9 | 3 | 4 | 28 | 1 | 38 | 11 | 29 | 47 | 37 |
| 6444 | 521 | 0 | 3 | 3 | 31 | 11 | 25 | 3 | 12 | 1 | 13 | 22 | 46 | 0 | 0 | 56 | 36 |
| 6890 | 557 | 21 | 18 | 30 | 12 | 0 | 16 | 3 | 6 | 1 | 7 | 40 | 2 | 0 | 0 | 0 | 11 |
| 15928 | 1287 | 287 | 6 | 1 | 34 | 9 | 0 | 27 | 16 | 2 | 29 | 47 | 40 | 0 | 0 | 19 | 14 |
| 22325 | 1804 | 359 | 10 | 34 | 42 | 11 | 7 | 33 | 17 | 11 | 29 | 47 | 6 | 11 | 29 | 44 | 56 |

## EPOCHÆ MEDIORUM MOTUUM LUNÆ Et Apogei ejus. Existente Terrâ in Aphelio.

| Annis Christi current. | Luna ab Æquinoctio. | | | | Apog. Lunæ ab Æquinoctio. | | | |
|---|---|---|---|---|---|---|---|---|
| | S. | o. | ′ | ″ | S. | o. | ′ | ″ |
| 1661 | 3 | 24 | 52 | 14 | 5 | 19 | 29 | 0 |
| 62 | 8 | 7 | 40 | 22 | 7 | 0 | 10 | 34 |
| 63 | 0 | 20 | 28 | 30 | 8 | 10 | 52 | 9 |
| 64 | 5 | 3 | 16 | 38 | 9 | 21 | 33 | 43 |
| 1665 | 9 | 16 | 4 | 46 | 11 | 2 | 15 | 18 |
| 1666 | 1 | 28 | 52 | 54 | 0 | 12 | 56 | 52 |
| 67 | 6 | 11 | 41 | 2 | 1 | 23 | 38 | 27 |
| 68 | 10 | 24 | 29 | 10 | 3 | 4 | 20 | 1 |
| 69 | 3 | 7 | 17 | 18 | 4 | 15 | 1 | 36 |
| 1670 | 7 | 20 | 5 | 26 | 5 | 25 | 43 | 10 |
| 1671 | 0 | 2 | 53 | 34 | 7 | 6 | 24 | 45 |
| 72 | 4 | 15 | 41 | 43 | 8 | 17 | 6 | 19 |
| 73 | 8 | 28 | 29 | 51 | 9 | 27 | 47 | 54 |
| 74 | 1 | 11 | 17 | 59 | 11 | 8 | 29 | 28 |
| 1675 | 5 | 24 | 6 | 7 | 0 | 19 | 11 | 3 |
| 1676 | 10 | 6 | 54 | 15 | 1 | 29 | 52 | 37 |
| 77 | 2 | 19 | 42 | 23 | 3 | 10 | 34 | 12 |
| 78 | 7 | 2 | 30 | 31 | 4 | 21 | 15 | 46 |
| 79 | 11 | 15 | 18 | 39 | 6 | 1 | 57 | 21 |
| 1680 | 3 | 28 | 6 | 47 | 7 | 12 | 38 | 55 |
| 1681 | 8 | 10 | 54 | 55 | 8 | 23 | 20 | 30 |
| 82 | 0 | 23 | 43 | 3 | 10 | 4 | 2 | 4 |
| 83 | 5 | 6 | 31 | 11 | 11 | 14 | 43 | 39 |
| 84 | 9 | 19 | 19 | 19 | 0 | 25 | 25 | 13 |
| 1685 | 2 | 2 | 7 | 27 | 2 | 6 | 6 | 48 |
| 1686 | 6 | 14 | 55 | 35 | 3 | 16 | 48 | 22 |
| 87 | 10 | 27 | 43 | 43 | 4 | 27 | 29 | 57 |
| 88 | 3 | 10 | 31 | 51 | 6 | 8 | 11 | 31 |
| 89 | 7 | 23 | 19 | 59 | 7 | 18 | 53 | 6 |
| 1690 | 0 | 6 | 8 | 7 | 8 | 29 | 34 | 40 |
| 1691 | 4 | 18 | 56 | 15 | 10 | 10 | 16 | 15 |
| 92 | 9 | 1 | 44 | 24 | 11 | 20 | 57 | 49 |
| 93 | 1 | 14 | 32 | 32 | 1 | 1 | 39 | 24 |
| 94 | 5 | 27 | 20 | 40 | 2 | 12 | 20 | 58 |
| 1695 | 10 | 10 | 8 | 48 | 3 | 23 | 2 | 33 |

| Annis Christi current. | Luna ab Æquinoctio. | | | | Apog. Lunæ ab Æquinoctio. | | | |
|---|---|---|---|---|---|---|---|---|
| | S. | o. | ′ | ″ | S. | o. | ′ | ″ |
| 1696 | 2 | 22 | 56 | 56 | 5 | 3 | 44 | 7 |
| 97 | 7 | 5 | 45 | 4 | 6 | 14 | 25 | 42 |
| 98 | 11 | 18 | 33 | 12 | 7 | 25 | 7 | 16 |
| 99 | 4 | 1 | 21 | 20 | 9 | 5 | 48 | 51 |
| 1700 | 8 | 14 | 9 | 28 | 10 | 16 | 30 | 25 |
| 1701 | 0 | 26 | 57 | 36 | 11 | 27 | 12 | 0 |
| 2 | 5 | 9 | 45 | 44 | 1 | 7 | 53 | 34 |
| 3 | 9 | 22 | 33 | 52 | 2 | 18 | 35 | 9 |
| 4 | 2 | 5 | 22 | 0 | 3 | 29 | 16 | 43 |
| 1705 | 6 | 18 | 10 | 8 | 5 | 9 | 58 | 18 |
| 1706 | 11 | 0 | 58 | 16 | 6 | 20 | 39 | 52 |
| 7 | 3 | 13 | 46 | 24 | 8 | 1 | 21 | 27 |
| 8 | 7 | 26 | 34 | 32 | 9 | 12 | 3 | 1 |
| 9 | 0 | 9 | 22 | 40 | 10 | 22 | 44 | 36 |
| 1710 | 4 | 22 | 10 | 48 | 0 | 3 | 26 | 10 |
| 1711 | 9 | 4 | 58 | 56 | 1 | 14 | 7 | 45 |
| 12 | 1 | 17 | 47 | 5 | 2 | 24 | 49 | 19 |
| 13 | 6 | 0 | 35 | 13 | 4 | 5 | 30 | 54 |
| 14 | 10 | 13 | 23 | 21 | 5 | 16 | 12 | 28 |
| 1715 | 2 | 26 | 11 | 29 | 6 | 26 | 54 | 3 |
| 1716 | 7 | 8 | 59 | 37 | 8 | 7 | 35 | 37 |
| 17 | 11 | 21 | 47 | 45 | 9 | 18 | 17 | 12 |
| 18 | 4 | 4 | 35 | 53 | 10 | 28 | 58 | 46 |
| 19 | 8 | 17 | 24 | 1 | 0 | 9 | 40 | 21 |
| 1720 | 1 | 0 | 12 | 9 | 1 | 20 | 21 | 55 |
| 1721 | 5 | 13 | 0 | 17 | 3 | 1 | 3 | 30 |
| 22 | 9 | 25 | 48 | 25 | 4 | 11 | 45 | 4 |
| 23 | 2 | 8 | 36 | 33 | 5 | 22 | 26 | 39 |
| 24 | 6 | 21 | 24 | 41 | 7 | 3 | 8 | 13 |
| 1725 | 11 | 4 | 12 | 49 | 8 | 13 | 49 | 48 |
| 1726 | 3 | 17 | 0 | 57 | 9 | 24 | 31 | 22 |
| 27 | 7 | 29 | 49 | 5 | 11 | 5 | 12 | 57 |
| 28 | 0 | 12 | 37 | 13 | 0 | 15 | 54 | 31 |
| 29 | 4 | 25 | 25 | 21 | 1 | 26 | 36 | 6 |
| 1730 | 9 | 8 | 13 | 29 | 3 | 7 | 17 | 40 |

## EPOCHÆ MEDIORUM MOTUUM LUNÆ
## Et Apogei ejus. Existente Terrâ in Aphelio.

| Annis Christi current. | Luna ab Æquinoctio. | | | | Apog. Lunæ ab Æquinoctio. | | | |
|---|---|---|---|---|---|---|---|---|
| | S. | o. | ′ | ″ | S. | o. | ′ | ″ |
| 1731 | 1 | 21 | 1 | 37 | 4 | 17 | 59 | 15 |
| 32 | 6 | 3 | 49 | 46 | 5 | 28 | 40 | 49 |
| 33 | 10 | 16 | 37 | 54 | 7 | 9 | 22 | 24 |
| 34 | 2 | 29 | 26 | 2 | 8 | 20 | 3 | 58 |
| 1735 | 7 | 12 | 14 | 10 | 10 | 0 | 45 | 33 |
| 1736 | 11 | 25 | 2 | 18 | 11 | 11 | 27 | 7 |
| 37 | 4 | 7 | 50 | 26 | 0 | 22 | 8 | 42 |
| 38 | 8 | 20 | 38 | 34 | 2 | 2 | 50 | 16 |
| 39 | 1 | 3 | 26 | 42 | 3 | 13 | 31 | 51 |
| 1740 | 5 | 16 | 14 | 50 | 4 | 24 | 13 | 25 |
| 1741 | 9 | 29 | 2 | 58 | 6 | 4 | 55 | 0 |
| 42 | 2 | 11 | 51 | 6 | 7 | 15 | 36 | 34 |
| 43 | 6 | 24 | 39 | 14 | 8 | 26 | 18 | 9 |
| 44 | 11 | 7 | 27 | 22 | 10 | 6 | 59 | 43 |
| 1745 | 3 | 20 | 15 | 30 | 11 | 17 | 41 | 18 |
| 1746 | 8 | 3 | 3 | 38 | 0 | 28 | 22 | 52 |
| 47 | 0 | 15 | 51 | 46 | 2 | 9 | 4 | 27 |
| 48 | 4 | 28 | 39 | 54 | 3 | 19 | 46 | 1 |
| 49 | 9 | 11 | 28 | 2 | 5 | 0 | 27 | 36 |
| 1750 | 1 | 24 | 16 | 10 | 6 | 11 | 9 | 10 |
| 1751 | 6 | 7 | 4 | 18 | 7 | 21 | 50 | 45 |
| 52 | 10 | 19 | 52 | 27 | 9 | 2 | 32 | 19 |
| 53 | 3 | 2 | 40 | 35 | 10 | 13 | 13 | 54 |
| 54 | 7 | 15 | 28 | 43 | 11 | 23 | 55 | 28 |
| 1755 | 11 | 28 | 16 | 51 | 1 | 4 | 37 | 3 |
| 1756 | 4 | 11 | 4 | 59 | 2 | 15 | 18 | 37 |
| 57 | 8 | 23 | 53 | 7 | 3 | 26 | 0 | 12 |
| 58 | 1 | 6 | 41 | 15 | 5 | 6 | 41 | 46 |
| 59 | 5 | 19 | 29 | 23 | 6 | 17 | 23 | 21 |
| 1760 | 10 | 2 | 17 | 31 | 7 | 28 | 4 | 55 |
| 1761 | 2 | 15 | 5 | 39 | 9 | 8 | 46 | 30 |
| 62 | 6 | 27 | 53 | 47 | 10 | 19 | 28 | 4 |
| 63 | 11 | 10 | 41 | 55 | 0 | 0 | 9 | 39 |
| 64 | 3 | 23 | 30 | 3 | 1 | 10 | 51 | 13 |
| 1765 | 8 | 6 | 18 | 11 | 2 | 21 | 32 | 48 |

| Annis Christi curr. | Luna ab Æquinoctio. | | | | Apog. Lunæ ab Æquinoctio. | | | |
|---|---|---|---|---|---|---|---|---|
| | S. | o. | ′ | ″ | S. | o. | ′ | ″ |
| 1766 | 0 | 19 | 6 | 19 | 4 | 2 | 14 | 22 |
| 67 | 5 | 1 | 54 | 27 | 5 | 12 | 55 | 57 |
| 68 | 9 | 14 | 42 | 35 | 6 | 23 | 37 | 31 |
| 69 | 1 | 27 | 30 | 43 | 8 | 4 | 19 | 6 |
| 1770 | 6 | 10 | 18 | 51 | 9 | 15 | 0 | 40 |
| 1771 | 10 | 23 | 6 | 59 | 10 | 25 | 42 | 15 |
| 72 | 3 | 5 | 55 | 8 | 0 | 6 | 23 | 49 |
| 73 | 7 | 18 | 43 | 16 | 1 | 17 | 5 | 24 |
| 74 | 0 | 1 | 31 | 24 | 2 | 27 | 46 | 58 |
| 1775 | 4 | 14 | 19 | 32 | 4 | 8 | 28 | 33 |
| 1776 | 8 | 27 | 7 | 40 | 5 | 19 | 10 | 7 |
| 77 | 1 | 9 | 55 | 48 | 6 | 29 | 51 | 42 |
| 78 | 5 | 22 | 43 | 56 | 8 | 10 | 33 | 16 |
| 79 | 10 | 5 | 32 | 4 | 9 | 21 | 14 | 51 |
| 1780 | 2 | 18 | 20 | 12 | 11 | 1 | 56 | 25 |
| 1781 | 7 | 1 | 8 | 20 | 0 | 12 | 38 | 0 |
| 82 | 11 | 13 | 56 | 28 | 1 | 23 | 19 | 34 |
| 83 | 3 | 26 | 44 | 36 | 3 | 4 | 1 | 9 |
| 84 | 8 | 9 | 32 | 44 | 4 | 14 | 42 | 43 |
| 1785 | 0 | 22 | 20 | 52 | 5 | 25 | 24 | 18 |
| 1786 | 5 | 5 | 9 | 0 | 7 | 6 | 5 | 52 |
| 87 | 9 | 17 | 57 | 8 | 8 | 16 | 47 | 27 |
| 88 | 2 | 0 | 45 | 16 | 9 | 27 | 29 | 1 |
| 89 | 6 | 13 | 33 | 24 | 11 | 8 | 10 | 36 |
| 1790 | 10 | 26 | 21 | 32 | 0 | 18 | 52 | 10 |
| 1791 | 3 | 9 | 9 | 40 | 1 | 29 | 33 | 45 |
| 92 | 7 | 21 | 57 | 49 | 3 | 10 | 15 | 19 |
| 93 | 0 | 4 | 45 | 57 | 4 | 20 | 56 | 54 |
| 94 | 4 | 17 | 34 | 5 | 6 | 1 | 38 | 28 |
| 1795 | 9 | 0 | 22 | 13 | 7 | 12 | 20 | 3 |
| 1796 | 1 | 13 | 10 | 21 | 8 | 23 | 1 | 37 |
| 97 | 5 | 25 | 58 | 29 | 10 | 3 | 43 | 12 |
| 98 | 10 | 8 | 46 | 37 | 11 | 14 | 24 | 46 |
| 99 | 2 | 21 | 34 | 45 | 0 | 25 | 6 | 21 |
| 1800 | 7 | 4 | 22 | 53 | 2 | 5 | 47 | 55 |

# EPOCHÆ MOTUS NODI ASCENDENTIS LUNÆ
## Existente Terrâ in Aphelio.

| Annis Christicurrent. | Nodus ☽ Ascend. ab Æquinoct. S. o. ′ ″ | Annis Christicurrent. | Nodus ☽ Ascend. ab Æquinoct. S. o. ′ ″ | Annis Christicurrent. | Nodus ☽ Ascend. ab Æquinoct. S. o. ′ ″ | Annis Christicurrent. | Nodus ☽ Ascend. ab Æquinoct. S. o. ′ ″ |
|---|---|---|---|---|---|---|---|
| 1661 | 6 12 6 50 | 1696 | 7 25 7 52 | 1731 | 9 8 8 55 | 1766 | 10 21 9 57 |
| 62 | 5 22 46 17 | 97 | 7 5 47 20 | 32 | 8 18 48 22 | 67 | 10 1 49 25 |
| 63 | 5 3 25 45 | 98 | 6 16 26 47 | 33 | 7 29 27 50 | 68 | 9 12 28 52 |
| 64 | 4 14 5 12 | 99 | 5 27 6 15 | 34 | 7 10 7 17 | 69 | 8 23 8 20 |
| 1665 | 3 24 44 40 | 1700 | 5 7 45 42 | 1735 | 6 20 46 45 | 1770 | 8 3 47 47 |
| 1666 | 3 5 24 7 | 1701 | 4 18 25 10 | 1736 | 6 1 26 12 | 1771 | 7 14 27 15 |
| 67 | 2 16 3 35 | 2 | 3 29 4 37 | 37 | 5 12 5 40 | 72 | 6 25 6 42 |
| 68 | 1 26 43 2 | 3 | 3 9 44 5 | 38 | 4 22 45 7 | 73 | 6 5 46 10 |
| 69 | 1 7 22 30 | 4 | 2 20 23 32 | 39 | 4 3 24 35 | 74 | 5 16 25 37 |
| 1670 | 0 18 1 57 | 1705 | 2 1 3 0 | 1740 | 3 14 4 2 | 1775 | 4 27 5 5 |
| 1671 | 11 28 41 25 | 1706 | 1 11 42 27 | 1741 | 2 24 43 30 | 1776 | 4 7 44 32 |
| 72 | 11 9 20 52 | 7 | 0 22 21 55 | 42 | 2 5 22 57 | 77 | 3 18 24 0 |
| 73 | 10 20 0 20 | 8 | 0 3 1 22 | 43 | 1 16 2 25 | 78 | 2 29 3 27 |
| 74 | 10 0 39 47 | 9 | 11 13 40 50 | 44 | 0 26 41 52 | 79 | 2 9 42 55 |
| 1675 | 9 11 19 15 | 1710 | 10 24 20 17 | 1745 | 0 7 21 20 | 1780 | 1 20 22 22 |
| 1676 | 8 21 58 42 | 1711 | 10 4 59 45 | 1746 | 11 18 0 47 | 1781 | 1 1 1 50 |
| 77 | 8 2 38 10 | 12 | 9 15 39 12 | 47 | 10 28 40 15 | 82 | 0 11 41 17 |
| 78 | 7 13 17 37 | 13 | 8 26 18 40 | 48 | 10 9 19 42 | 83 | 11 22 20 45 |
| 79 | 6 23 57 5 | 14 | 8 6 58 7 | 49 | 9 19 59 10 | 84 | 11 3 0 12 |
| 1680 | 6 4 36 32 | 1715 | 7 17 37 35 | 1750 | 9 0 38 37 | 1785 | 10 13 39 40 |
| 1681 | 5 15 16 0 | 1716 | 6 28 17 2 | 1751 | 8 11 18 5 | 1786 | 9 24 19 7 |
| 82 | 4 25 55 27 | 17 | 6 8 56 30 | 52 | 7 21 57 32 | 87 | 9 4 58 35 |
| 83 | 4 6 34 55 | 18 | 5 19 35 57 | 53 | 7 2 37 0 | 88 | 8 15 38 2 |
| 84 | 3 17 14 22 | 19 | 5 0 15 25 | 54 | 6 13 16 27 | 89 | 7 26 17 30 |
| 1685 | 2 27 53 50 | 1720 | 4 10 54 52 | 1755 | 5 23 55 55 | 1790 | 7 6 56 57 |
| 1686 | 2 8 33 17 | 1721 | 3 21 34 20 | 1756 | 5 4 35 22 | 1791 | 6 17 36 25 |
| 87 | 1 19 12 45 | 22 | 3 2 13 47 | 57 | 4 15 14 50 | 92 | 5 28 15 52 |
| 88 | 0 29 52 12 | 23 | 2 12 53 15 | 58 | 3 25 54 17 | 93 | 5 8 55 20 |
| 89 | 0 10 31 40 | 24 | 1 23 32 42 | 59 | 3 6 33 45 | 94 | 4 19 34 47 |
| 1690 | 11 21 11 7 | 1725 | 1 4 12 10 | 1760 | 2 17 13 12 | 1795 | 4 0 14 15 |
| 1691 | 11 1 50 35 | 1726 | 0 14 51 37 | 1761 | 1 27 52 40 | 1796 | 3 10 53 42 |
| 92 | 10 12 30 2 | 27 | 11 25 31 5 | 62 | 1 8 32 7 | 97 | 2 21 33 10 |
| 93 | 9 23 9 30 | 28 | 11 6 10 32 | 63 | 0 19 11 35 | 98 | 2 2 12 37 |
| 94 | 9 3 48 57 | 29 | 10 16 50 0 | 64 | 11 29 51 2 | 99 | 1 12 52 5 |
| 1695 | 8 14 28 25 | 1730 | 9 27 29 27 | 1765 | 11 10 30 30 | 1800 | 0 23 31 32 |

## *MEDII MOTVS LVNÆ, APOGEI ET NODORVM AD GRADVS ANOMALIÆ MEDIÆ SOLIS.*

### *Anomalia Media Solis.*

| Gr. | Sig. 0. Motus Medius Lunæ. | | | | Mot. Apog. Lunæ. | | | Mot. Nod. Retrog. | | | Sig. I. Motus Medius Lunæ. | | | | Mot. Apog. Lunæ. | | | Mot. Nod. Retrog. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | S. | o. | ′ | ″ | o. | ′ | ″ | o. | ′ | ″ | S. | o. | ′ | ″ | o. | ′ | ″ | o. | ′ | ″ |
| 1 | 0 | 13 | 22 | 20 | 0 | 6 | 27 | 0 | 3 | 4 | 1 | 24 | 32 | 7 | 3 | 20 | 8 | 1 | 35 | 8 |
| 2 | 0 | 26 | 44 | 40 | 0 | 12 | 53 | 0 | 6 | 8 | 2 | 7 | 54 | 26 | 3 | 26 | 38 | 1 | 38 | 13 |
| 3 | 1 | 10 | 7 | 0 | 0 | 19 | 20 | 0 | 9 | 11 | 2 | 21 | 16 | 44 | 3 | 33 | 7 | 1 | 41 | 18 |
| 4 | 1 | 23 | 29 | 20 | 0 | 25 | 46 | 0 | 12 | 15 | 3 | 4 | 39 | 2 | 3 | 39 | 37 | 1 | 44 | 23 |
| 5 | 2 | 6 | 51 | 40 | 0 | 32 | 12 | 0 | 15 | 19 | 3 | 18 | 1 | 20 | 3 | 46 | 6 | 1 | 47 | 29 |
| 6 | 2 | 20 | 14 | 0 | 0 | 38 | 38 | 0 | 18 | 22 | 4 | 1 | 23 | 38 | 3 | 52 | 36 | 1 | 50 | 34 |
| 7 | 3 | 3 | 36 | 20 | 0 | 45 | 5 | 0 | 21 | 26 | 4 | 14 | 45 | 56 | 3 | 59 | 7 | 1 | 53 | 40 |
| 8 | 3 | 16 | 58 | 40 | 0 | 51 | 32 | 0 | 24 | 29 | 4 | 28 | 8 | 14 | 4 | 5 | 37 | 1 | 56 | 45 |
| 9 | 4 | 0 | 21 | 0 | 0 | 57 | 58 | 0 | 27 | 33 | 5 | 11 | 30 | 32 | 4 | 12 | 8 | 1 | 59 | 50 |
| 10 | 4 | 13 | 43 | 19 | 1 | 4 | 25 | 0 | 30 | 37 | 5 | 24 | 52 | 49 | 4 | 18 | 38 | 2 | 2 | 56 |
| 11 | 4 | 27 | 5 | 39 | 1 | 10 | 52 | 0 | 33 | 41 | 6 | 8 | 15 | 6 | 4 | 25 | 9 | 2 | 6 | 2 |
| 12 | 5 | 10 | 27 | 59 | 1 | 17 | 19 | 0 | 36 | 45 | 6 | 21 | 37 | 23 | 4 | 31 | 41 | 2 | 9 | 9 |
| 13 | 5 | 23 | 50 | 19 | 1 | 23 | 46 | 0 | 39 | 49 | 7 | 4 | 59 | 40 | 4 | 38 | 12 | 2 | 12 | 15 |
| 14 | 6 | 7 | 12 | 38 | 1 | 30 | 13 | 0 | 42 | 53 | 7 | 18 | 21 | 57 | 4 | 44 | 44 | 2 | 15 | 21 |
| 15 | 6 | 20 | 34 | 58 | 1 | 36 | 40 | 0 | 45 | 57 | 8 | 1 | 44 | 14 | 4 | 51 | 16 | 2 | 18 | 27 |
| 16 | 7 | 3 | 57 | 18 | 1 | 43 | 7 | 0 | 49 | 1 | 8 | 15 | 6 | 31 | 4 | 57 | 49 | 2 | 21 | 33 |
| 17 | 7 | 17 | 19 | 38 | 1 | 49 | 34 | 0 | 52 | 5 | 8 | 28 | 28 | 48 | 5 | 4 | 21 | 2 | 24 | 40 |
| 18 | 8 | 0 | 41 | 58 | 1 | 56 | 2 | 0 | 55 | 9 | 9 | 11 | 51 | 4 | 5 | 10 | 53 | 2 | 27 | 47 |
| 19 | 8 | 14 | 4 | 18 | 2 | 2 | 29 | 0 | 58 | 13 | 9 | 25 | 13 | 20 | 5 | 17 | 26 | 2 | 30 | 54 |
| 20 | 8 | 27 | 26 | 37 | 2 | 8 | 56 | 1 | 1 | 17 | 10 | 8 | 35 | 36 | 5 | 24 | 0 | 2 | 34 | 0 |
| 21 | 9 | 10 | 48 | 57 | 2 | 15 | 23 | 1 | 4 | 22 | 10 | 21 | 57 | 52 | 5 | 30 | 33 | 2 | 37 | 7 |
| 22 | 9 | 24 | 11 | 16 | 2 | 21 | 51 | 1 | 7 | 26 | 11 | 5 | 20 | 8 | 5 | 37 | 7 | 2 | 40 | 15 |
| 23 | 10 | 7 | 33 | 35 | 2 | 28 | 19 | 1 | 10 | 31 | 11 | 18 | 42 | 24 | 5 | 43 | 41 | 2 | 43 | 22 |
| 24 | 10 | 20 | 55 | 54 | 2 | 34 | 47 | 1 | 13 | 35 | 0 | 2 | 4 | 40 | 5 | 50 | 16 | 2 | 46 | 30 |
| 25 | 11 | 4 | 18 | 13 | 2 | 41 | 15 | 1 | 16 | 39 | 0 | 15 | 26 | 55 | 5 | 56 | 50 | 2 | 49 | 37 |
| 26 | 11 | 17 | 40 | 32 | 2 | 47 | 44 | 1 | 19 | 44 | 0 | 28 | 49 | 10 | 6 | 3 | 25 | 2 | 52 | 45 |
| 27 | 0 | 1 | 2 | 52 | 2 | 54 | 13 | 1 | 22 | 48 | 1 | 12 | 11 | 24 | 6 | 10 | 0 | 2 | 55 | 53 |
| 28 | 0 | 14 | 25 | 11 | 3 | 0 | 41 | 1 | 25 | 53 | 1 | 25 | 33 | 39 | 6 | 16 | 36 | 2 | 59 | 0 |
| 29 | 0 | 27 | 47 | 30 | 3 | 7 | 10 | 1 | 28 | 58 | 2 | 8 | 55 | 54 | 6 | 23 | 12 | 3 | 2 | 8 |
| 30 | 1 | 11 | 9 | 48 | 3 | 13 | 39 | 1 | 32 | 3 | 2 | 22 | 18 | 8 | 6 | 29 | 48 | 3 | 5 | 16 |

## *MEDII MOTVS LVNÆ, APOGEI ET NODORVM AD GRADVS ANOMALIÆ MEDIÆ SOLIS.*

### *Anomalia Media Solis.*

| Gr. | Sig. II. Motus Medius Lunæ. | | | | Mot. Apog. Lunæ. | | | Mot. Nod. Retrog. | | | Sig. III. Motus Medius Lunæ. | | | | Mot. Apog. Lunæ. | | | Mot. Nod. Retrog. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | S. | o. | ′ | ″ | o. | ′ | ″ | o. | ′ | ″ | S. | o. | ′ | ″ | o. | ′ | ″ | o. | ′ | ″ |
| 1 | 3 | 5 | 40 | 23 | 6 | 36 | 24 | 3 | 8 | 25 | 4 | 16 | 45 | 59 | 9 | 57 | 10 | 4 | 43 | 51 |
| 2 | 3 | 19 | 2 | 37 | 6 | 43 | 0 | 3 | 11 | 33 | 5 | 0 | 8 | 7 | 10 | 3 | 57 | 4 | 47 | 5 |
| 3 | 4 | 2 | 24 | 51 | 6 | 49 | 37 | 3 | 14 | 42 | 5 | 13 | 30 | 14 | 10 | 10 | 45 | 4 | 50 | 18 |
| 4 | 4 | 15 | 47 | 4 | 6 | 56 | 15 | 3 | 17 | 51 | 5 | 26 | 52 | 22 | 10 | 17 | 33 | 4 | 53 | 32 |
| 5 | 4 | 29 | 9 | 18 | 7 | 2 | 52 | 3 | 21 | 0 | 6 | 10 | 14 | 29 | 10 | 24 | 21 | 4 | 56 | 46 |
| 6 | 5 | 12 | 31 | 31 | 7 | 9 | 30 | 3 | 24 | 10 | 6 | 23 | 36 | 37 | 10 | 31 | 9 | 5 | 0 | 0 |
| 7 | 5 | 25 | 53 | 44 | 7 | 16 | 8 | 3 | 27 | 19 | 7 | 6 | 58 | 43 | 10 | 37 | 58 | 5 | 3 | 15 |
| 8 | 6 | 9 | 15 | 57 | 7 | 22 | 47 | 3 | 30 | 29 | 7 | 20 | 20 | 50 | 10 | 44 | 48 | 5 | 6 | 29 |
| 9 | 6 | 22 | 38 | 9 | 7 | 29 | 26 | 3 | 33 | 38 | 8 | 3 | 42 | 56 | 10 | 51 | 37 | 5 | 9 | 44 |
| 10 | 7 | 6 | 0 | 22 | 7 | 36 | 6 | 3 | 36 | 48 | 8 | 17 | 5 | 3 | 10 | 58 | 27 | 5 | 12 | 59 |
| 11 | 7 | 19 | 22 | 34 | 7 | 42 | 46 | 3 | 39 | 58 | 9 | 0 | 27 | 9 | 11 | 5 | 18 | 5 | 16 | 14 |
| 12 | 8 | 2 | 44 | 46 | 7 | 49 | 26 | 3 | 43 | 8 | 9 | 13 | 49 | 14 | 11 | 12 | 9 | 5 | 19 | 29 |
| 13 | 8 | 16 | 6 | 59 | 7 | 56 | 6 | 3 | 46 | 18 | 9 | 27 | 11 | 20 | 11 | 19 | 0 | 5 | 22 | 44 |
| 14 | 8 | 29 | 29 | 12 | 8 | 2 | 47 | 3 | 49 | 28 | 10 | 10 | 33 | 25 | 11 | 25 | 51 | 5 | 26 | 0 |
| 15 | 9 | 12 | 51 | 24 | 8 | 9 | 28 | 3 | 52 | 39 | 10 | 23 | 55 | 31 | 11 | 32 | 42 | 5 | 29 | 15 |
| 16 | 9 | 26 | 13 | 35 | 8 | 16 | 9 | 3 | 55 | 50 | 11 | 7 | 17 | 35 | 11 | 39 | 34 | 5 | 32 | 31 |
| 17 | 10 | 9 | 35 | 46 | 8 | 22 | 50 | 3 | 59 | 1 | 11 | 20 | 39 | 40 | 11 | 46 | 27 | 5 | 35 | 47 |
| 18 | 10 | 22 | 57 | 56 | 8 | 29 | 32 | 4 | 2 | 12 | 0 | 4 | 1 | 45 | 11 | 53 | 20 | 5 | 39 | 4 |
| 19 | 11 | 6 | 20 | 6 | 8 | 36 | 14 | 4 | 5 | 23 | 0 | 17 | 23 | 49 | 12 | 0 | 13 | 5 | 42 | 20 |
| 20 | 11 | 19 | 42 | 17 | 8 | 42 | 57 | 4 | 8 | 35 | 1 | 0 | 45 | 53 | 12 | 7 | 7 | 5 | 45 | 37 |
| 21 | 0 | 3 | 4 | 28 | 8 | 49 | 40 | 4 | 11 | 47 | 1 | 14 | 7 | 56 | 12 | 14 | 1 | 5 | 48 | 54 |
| 22 | 0 | 16 | 26 | 38 | 8 | 56 | 24 | 4 | 14 | 59 | 1 | 27 | 30 | 0 | 12 | 20 | 55 | 5 | 52 | 11 |
| 23 | 0 | 29 | 48 | 48 | 9 | 3 | 7 | 4 | 18 | 10 | 2 | 10 | 52 | 4 | 12 | 27 | 50 | 5 | 55 | 28 |
| 24 | 1 | 13 | 10 | 57 | 9 | 9 | 51 | 4 | 21 | 22 | 2 | 24 | 14 | 7 | 12 | 34 | 45 | 5 | 58 | 45 |
| 25 | 1 | 26 | 33 | 7 | 9 | 16 | 36 | 4 | 24 | 35 | 3 | 7 | 36 | 10 | 12 | 41 | 40 | 6 | 2 | 3 |
| 26 | 2 | 9 | 55 | 16 | 9 | 23 | 21 | 4 | 27 | 47 | 3 | 20 | 58 | 14 | 12 | 48 | 36 | 6 | 5 | 20 |
| 27 | 2 | 23 | 17 | 24 | 9 | 30 | 6 | 4 | 31 | 0 | 4 | 4 | 20 | 17 | 12 | 55 | 32 | 6 | 8 | 38 |
| 28 | 3 | 6 | 39 | 33 | 9 | 36 | 52 | 4 | 34 | 12 | 4 | 17 | 42 | 19 | 13 | 2 | 28 | 6 | 11 | 56 |
| 29 | 3 | 20 | 1 | 42 | 9 | 43 | 38 | 4 | 37 | 25 | 5 | 1 | 4 | 21 | 13 | 9 | 24 | 6 | 15 | 14 |
| 30 | 4 | 3 | 23 | 51 | 9 | 50 | 24 | 4 | 40 | 38 | 5 | 14 | 26 | 24 | 13 | 16 | 21 | 6 | 18 | 32 |

## *MEDII MOTVS LVNÆ, APOGEI ET NODORVM AD GRADVS ANOMALIÆ MEDIÆ SOLIS.*

### *Anomalia Media Solis.*

| Gr. | Sig. IV. Motus Medius Lunæ. | | | | Mot. Apog. Lunæ. | | | Mot. Nod. Retrog. | | | Sig. V. Motus Medius Lunæ. | | | | Mot. Apog. Lunæ. | | | Mot. Nod. Retrog. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| o | S. | o. | ′ | ″ | o. | ′ | ″ | o. | ′ | ″ | S. | o. | ′ | ″ | o. | ′ | ″ | o. | ′ | ″ |
| 1 | 5 | 27 | 48 | 26 | 13 | 23 | 18 | 6 | 21 | 50 | 7 | 8 | 48 | 0 | 16 | 54 | 14 | 8 | 2 | 6 |
| 2 | 6 | 11 | 10 | 27 | 13 | 30 | 16 | 6 | 25 | 9 | 7 | 22 | 9 | 57 | 17 | 1 | 20 | 8 | 5 | 28 |
| 3 | 6 | 24 | 32 | 28 | 13 | 37 | 14 | 6 | 28 | 27 | 8 | 5 | 31 | 54 | 17 | 8 | 25 | 8 | 8 | 51 |
| 4 | 7 | 7 | 54 | 29 | 13 | 44 | 13 | 6 | 31 | 46 | 8 | 18 | 53 | 51 | 17 | 15 | 31 | 8 | 12 | 13 |
| 5 | 7 | 21 | 16 | 30 | 13 | 51 | 12 | 6 | 35 | 5 | 9 | 2 | 15 | 48 | 17 | 22 | 37 | 8 | 15 | 35 |
| 6 | 8 | 4 | 38 | 31 | 13 | 58 | 10 | 6 | 38 | 24 | 9 | 15 | 37 | 45 | 17 | 29 | 44 | 8 | 18 | 58 |
| 7 | 8 | 18 | 0 | 32 | 14 | 5 | 9 | 6 | 41 | 43 | 9 | 28 | 59 | 41 | 17 | 36 | 50 | 8 | 22 | 20 |
| 8 | 9 | 1 | 22 | 33 | 14 | 12 | 8 | 6 | 45 | 3 | 10 | 12 | 21 | 37 | 17 | 43 | 57 | 8 | 25 | 43 |
| 9 | 9 | 14 | 44 | 34 | 14 | 19 | 9 | 6 | 48 | 23 | 10 | 25 | 43 | 33 | 17 | 51 | 4 | 8 | 29 | 5 |
| 10 | 9 | 28 | 6 | 34 | 14 | 26 | 9 | 6 | 51 | 42 | 11 | 9 | 5 | 29 | 17 | 58 | 11 | 8 | 32 | 28 |
| 11 | 10 | 11 | 28 | 33 | 14 | 33 | 10 | 6 | 55 | 2 | 11 | 22 | 27 | 25 | 18 | 5 | 17 | 8 | 35 | 52 |
| 12 | 10 | 24 | 50 | 33 | 14 | 40 | 11 | 6 | 58 | 23 | 0 | 5 | 49 | 21 | 18 | 12 | 24 | 8 | 39 | 15 |
| 13 | 11 | 8 | 12 | 33 | 14 | 47 | 11 | 7 | 1 | 42 | 0 | 19 | 11 | 17 | 18 | 19 | 31 | 8 | 42 | 38 |
| 14 | 11 | 21 | 34 | 32 | 14 | 54 | 12 | 7 | 5 | 3 | 1 | 2 | 33 | 14 | 18 | 26 | 38 | 8 | 46 | 1 |
| 15 | 0 | 4 | 56 | 31 | 15 | 1 | 14 | 7 | 8 | 23 | 1 | 15 | 55 | 10 | 18 | 33 | 46 | 8 | 49 | 25 |
| 16 | 0 | 18 | 18 | 31 | 15 | 8 | 16 | 7 | 11 | 43 | 1 | 29 | 17 | 6 | 18 | 40 | 54 | 8 | 52 | 48 |
| 17 | 1 | 1 | 40 | 30 | 15 | 15 | 18 | 7 | 15 | 4 | 2 | 12 | 39 | 2 | 18 | 48 | 2 | 8 | 56 | 12 |
| 18 | 1 | 15 | 2 | 29 | 15 | 22 | 21 | 7 | 18 | 25 | 2 | 26 | 0 | 58 | 18 | 55 | 10 | 8 | 59 | 35 |
| 19 | 1 | 28 | 24 | 27 | 15 | 29 | 23 | 7 | 21 | 46 | 3 | 9 | 22 | 54 | 19 | 2 | 17 | 9 | 2 | 58 |
| 20 | 2 | 11 | 46 | 26 | 15 | 36 | 26 | 7 | 25 | 7 | 3 | 22 | 44 | 50 | 19 | 9 | 25 | 9 | 6 | 22 |
| 21 | 2 | 25 | 8 | 25 | 15 | 43 | 29 | 7 | 28 | 29 | 4 | 6 | 6 | 46 | 19 | 16 | 33 | 9 | 9 | 45 |
| 22 | 3 | 8 | 30 | 23 | 15 | 50 | 33 | 7 | 31 | 50 | 4 | 19 | 28 | 41 | 19 | 23 | 41 | 9 | 13 | 9 |
| 23 | 3 | 21 | 52 | 21 | 15 | 57 | 36 | 7 | 35 | 10 | 5 | 2 | 50 | 36 | 19 | 30 | 49 | 9 | 16 | 32 |
| 24 | 4 | 5 | 14 | 18 | 16 | 4 | 40 | 7 | 38 | 32 | 5 | 16 | 12 | 31 | 19 | 37 | 57 | 9 | 19 | 56 |
| 25 | 4 | 18 | 36 | 16 | 16 | 11 | 44 | 7 | 41 | 53 | 5 | 29 | 34 | 26 | 19 | 45 | 6 | 9 | 23 | 19 |
| 26 | 5 | 1 | 58 | 14 | 16 | 18 | 49 | 7 | 45 | 15 | 6 | 12 | 56 | 21 | 19 | 52 | 14 | 9 | 26 | 42 |
| 27 | 5 | 15 | 20 | 12 | 16 | 25 | 53 | 7 | 48 | 37 | 6 | 26 | 18 | 17 | 19 | 59 | 22 | 9 | 30 | 6 |
| 28 | 5 | 28 | 42 | 5 | 16 | 32 | 58 | 7 | 51 | 59 | 7 | 9 | 40 | 13 | 20 | 6 | 30 | 9 | 33 | 29 |
| 29 | 6 | 12 | 4 | 6 | 16 | 40 | 3 | 7 | 55 | 21 | 7 | 23 | 2 | 8 | 20 | 13 | 38 | 9 | 36 | 53 |
| 30 | 6 | 25 | 26 | 3 | 16 | 47 | 8 | 7 | 58 | 43 | 8 | 6 | 24 | 4 | 20 | 20 | 47 | 9 | 40 | 16 |

## *MEDII MOTUS LUNÆ, APOGEI ET NODORUM AD GRADUS ANOMALIÆ MEDIÆ SOLIS.*

### *Anomalia Media Solis.*

## Sig. VI.

| Gr. | *Motus Medius Lunæ.* | | | | *Mot. Apog. Lunæ.* | | | *Mot. Nod. Retrog.* | | |
|---|---|---|---|---|---|---|---|---|---|---|
| o | *S.* | o. | ′ | ″ | o. | ′ | ″ | o. | ′ | ″ |
| 1 | 8 | 19 | 46 | 0 | 20 | 27 | 55 | 9 | 43 | 40 |
| 2 | 9 | 3 | 7 | 55 | 20 | 35 | 4 | 9 | 47 | 3 |
| 3 | 9 | 16 | 29 | 51 | 20 | 42 | 12 | 9 | 50 | 26 |
| 4 | 9 | 29 | 51 | 47 | 20 | 49 | 20 | 9 | 53 | 50 |
| 5 | 10 | 13 | 13 | 42 | 20 | 56 | 28 | 9 | 57 | 13 |
| 6 | 10 | 26 | 35 | 37 | 21 | 3 | 37 | 10 | 0 | 37 |
| 7 | 11 | 9 | 57 | 32 | 21 | 10 | 46 | 10 | 4 | 0 |
| 8 | 11 | 23 | 19 | 28 | 21 | 17 | 54 | 10 | 7 | 24 |
| 9 | ☉ | 6 | 41 | 24 | 21 | 25 | 1 | 10 | 10 | 47 |
| 10 | 0 | 20 | 3 | 19 | 21 | 32 | 9 | 10 | 14 | 10 |
| 11 | 1 | 3 | 25 | 14 | 21 | 39 | 17 | 10 | 17 | 34 |
| 12 | 1 | 16 | 47 | 10 | 21 | 46 | 24 | 10 | 20 | 57 |
| 13 | 2 | 0 | 9 | 6 | 21 | 53 | 32 | 10 | 24 | 21 |
| 14 | 2 | 13 | 31 | 2 | 22 | 0 | 40 | 10 | 27 | 44 |
| 15 | 2 | 26 | 52 | 57 | 22 | 7 | 48 | 10 | 31 | 7 |
| 16 | 3 | 10 | 14 | 53 | 22 | 14 | 56 | 10 | 34 | 31 |
| 17 | 3 | 23 | 36 | 49 | 22 | 22 | 3 | 10 | 37 | 54 |
| 18 | 4 | 6 | 58 | 45 | 22 | 29 | 10 | 10 | 41 | 17 |
| 19 | 4 | 20 | 20 | 42 | 22 | 36 | 17 | 10 | 44 | 40 |
| 20 | 5 | 3 | 42 | 38 | 22 | 43 | 24 | 10 | 48 | 4 |
| 21 | 5 | 17 | 4 | 34 | 22 | 50 | 31 | 10 | 51 | 27 |
| 22 | 6 | 0 | 26 | 30 | 22 | 57 | 38 | 10 | 54 | 49 |
| 23 | 6 | 13 | 48 | 26 | 23 | 4 | 44 | 10 | 58 | 12 |
| 24 | 6 | 27 | 10 | 23 | 23 | 11 | 50 | 11 | 1 | 34 |
| 25 | 7 | 10 | 32 | 19 | 23 | 18 | 57 | 11 | 4 | 57 |
| 26 | 7 | 23 | 54 | 16 | 23 | 26 | 3 | 11 | 8 | 19 |
| 27 | 8 | 7 | 16 | 13 | 23 | 33 | 9 | 11 | 11 | 41 |
| 28 | 8 | 20 | 38 | 10 | 23 | 40 | 15 | 11 | 15 | 4 |
| 29 | 9 | 4 | 0 | 8 | 23 | 47 | 20 | 11 | 18 | 26 |
| 30 | 9 | 17 | 22 | 5 | 23 | 54 | 26 | 11 | 21 | 49 |

## Sig. VII.

| *Motus Medius Lunæ.* | | | | *Mot. Apog. Lunæ.* | | | *Mot. Nod. Retrog.* | | |
|---|---|---|---|---|---|---|---|---|---|
| *S.* | o. | ′ | ″ | o. | ′ | ″ | o. | ′ | ″ |
| 10 | 0 | 44 | 2 | 24 | 1 | 31 | 11 | 25 | 12 |
| 10 | 14 | 5 | 59 | 24 | 8 | 36 | 11 | 28 | 34 |
| 10 | 27 | 27 | 56 | 24 | 15 | 41 | 11 | 31 | 55 |
| 11 | 10 | 49 | 54 | 24 | 22 | 46 | 11 | 35 | 16 |
| 11 | 24 | 11 | 52 | 24 | 29 | 51 | 11 | 38 | 39 |
| 0 | 7 | 33 | 50 | 24 | 36 | 55 | 11 | 42 | 0 |
| 0 | 20 | 55 | 47 | 24 | 43 | 58 | 11 | 45 | 22 |
| 1 | 4 | 17 | 45 | 24 | 51 | 1 | 11 | 48 | 42 |
| 1 | 17 | 39 | 43 | 24 | 58 | 5 | 11 | 52 | 4 |
| 2 | 1 | 1 | 42 | 25 | 5 | 8 | 11 | 55 | 25 |
| 2 | 14 | 23 | 41 | 25 | 12 | 11 | 11 | 58 | 46 |
| 2 | 27 | 45 | 40 | 25 | 19 | 13 | 12 | 2 | 7 |
| 3 | 11 | 7 | 39 | 25 | 26 | 16 | 12 | 5 | 28 |
| 3 | 24 | 29 | 38 | 25 | 33 | 18 | 12 | 8 | 49 |
| 4 | 7 | 51 | 37 | 25 | 40 | 20 | 12 | 12 | 9 |
| 4 | 21 | 13 | 36 | 25 | 47 | 22 | 12 | 15 | 30 |
| 5 | 4 | 35 | 35 | 25 | 54 | 23 | 12 | 18 | 50 |
| 5 | 17 | 57 | 35 | 26 | 1 | 24 | 12 | 22 | 9 |
| 6 | 1 | 19 | 35 | 26 | 8 | 25 | 12 | 25 | 30 |
| 6 | 14 | 41 | 34 | 26 | 15 | 26 | 12 | 28 | 50 |
| 6 | 28 | 3 | 34 | 26 | 22 | 26 | 12 | 32 | 10 |
| 7 | 11 | 25 | 35 | 26 | 29 | 25 | 12 | 35 | 29 |
| 7 | 24 | 47 | 36 | 26 | 36 | 25 | 12 | 38 | 49 |
| 8 | 8 | 9 | 37 | 26 | 43 | 24 | 12 | 42 | 9 |
| 8 | 21 | 31 | 38 | 26 | 50 | 24 | 12 | 45 | 28 |
| 9 | 4 | 53 | 39 | 26 | 57 | 21 | 12 | 48 | 46 |
| 9 | 18 | 15 | 40 | 27 | 4 | 20 | 12 | 52 | 5 |
| 10 | 1 | 37 | 41 | 27 | 11 | 18 | 12 | 55 | 14 |
| 10 | 14 | 59 | 42 | 27 | 18 | 16 | 12 | 58 | 42 |
| 10 | 28 | 21 | 44 | 27 | 25 | 13 | 13 | 2 | 0 |

## *MEDII MOTUS LUNÆ, APOGEI ET NODORUM AD GRADUS ANOMALIÆ MEDIÆ SOLIS.*

### *Anomalia Media Solis.*

| Gr. | Sig. VIII. Motus Medius Lunæ. | Mot. Apog. Lunæ. | Mot. Nod. Retrog. | Sig. IX. Motus Medius Lunæ. | Mot. Apog. Lunæ. | Mot. Nod. Retrog. |
|---|---|---|---|---|---|---|
| o | S. o. ′ ″ | S. o. ′ ″ | o. ′ ″ | S. o. ′ ″ | S. o. ′ ″ | o. ′ ″ |
| 1 | 11 11 43 47 | 0 27 32 10 | 13 5 18 | 0 22 46 26 | 1 0 57 57 | 14 43 7 |
| 2 | 11 25 5 49 | 0 27 39 7 | 13 8 36 | 1 6 8 34 | 1 1 4 43 | 14 46 20 |
| 3 | 0 8 27 51 | 0 27 46 3 | 13 11 54 | 1 19 30 43 | 1 1 11 28 | 14 49 33 |
| 4 | 0 21 49 54 | 0 27 52 59 | 13 15 12 | 2 2 52 52 | 1 1 18 13 | 14 52 45 |
| 5 | 1 5 11 57 | 0 27 59 54 | 13 18 30 | 2 16 15 1 | 1 1 24 58 | 14 55 57 |
| 6 | 1 18 34 0 | 0 28 6 49 | 13 21 47 | 2 29 37 11 | 1 1 31 43 | 14 59 10 |
| 7 | 2 1 56 3 | 0 28 13 44 | 13 25 4 | 3 12 59 20 | 1 1 38 27 | 15 2 22 |
| 8 | 2 15 18 7 | 0 28 20 39 | 13 28 21 | 3 26 21 30 | 1 1 45 10 | 15 5 34 |
| 9 | 2 28 40 11 | 0 28 27 33 | 13 31 38 | 4 9 43 40 | 1 1 51 54 | 15 8 46 |
| 10 | 3 12 2 15 | 0 28 34 27 | 13 34 55 | 4 23 5 51 | 1 1 58 37 | 15 11 58 |
| 11 | 3 25 24 19 | 0 28 41 21 | 13 38 12 | 5 6 28 1 | 1 2 5 20 | 15 15 9 |
| 12 | 4 8 46 23 | 0 28 48 14 | 13 41 29 | 5 19 50 11 | 1 2 12 2 | 15 18 20 |
| 13 | 4 22 8 28 | 0 28 55 7 | 13 44 45 | 6 3 12 22 | 1 2 18 44 | 15 21 31 |
| 14 | 5 5 30 33 | 0 29 2 0 | 13 48 1 | 6 16 34 33 | 1 2 25 26 | 15 24 42 |
| 15 | 5 18 52 38 | 0 29 8 52 | 13 51 17 | 6 29 56 44 | 1 2 32 7 | 15 27 53 |
| 16 | 6 2 14 43 | 0 29 15 44 | 13 54 32 | 7 13 18 56 | 1 2 38 48 | 15 31 4 |
| 17 | 6 15 36 48 | 0 29 22 35 | 13 57 48 | 7 26 41 8 | 1 2 45 28 | 15 34 14 |
| 18 | 6 28 58 54 | 0 29 29 26 | 14 1 3 | 8 10 3 21 | 1 2 52 8 | 15 37 24 |
| 19 | 7 12 20 59 | 0 29 36 16 | 14 4 19 | 8 23 25 33 | 1 2 58 48 | 15 40 34 |
| 20 | 7 25 43 5 | 0 29 43 7 | 14 7 34 | 9 6 47 45 | 1 3 5 28 | 15 43 44 |
| 21 | 8 9 5 12 | 0 29 49 57 | 14 10 49 | 9 20 9 58 | 1 3 12 8 | 15 46 54 |
| 22 | 8 22 27 18 | 0 29 56 46 | 14 14 3 | 10 3 32 10 | 1 3 18 47 | 15 50 4 |
| 23 | 9 5 49 25 | 1 0 3 36 | 14 17 17 | 10 16 54 23 | 1 3 25 26 | 15 53 13 |
| 24 | 9 19 11 31 | 1 0 10 25 | 14 20 32 | 11 0 16 36 | 1 3 32 4 | 15 56 22 |
| 25 | 10 2 33 38 | 1 0 17 13 | 14 23 46 | 11 13 38 49 | 1 3 38 42 | 15 59 32 |
| 26 | 10 15 55 45 | 1 0 24 1 | 14 27 0 | 11 27 1 3 | 1 3 45 19 | 16 2 41 |
| 27 | 10 29 17 53 | 1 0 30 49 | 14 30 14 | 0 10 23 16 | 1 3 51 57 | 16 5 50 |
| 28 | 11 12 40 1 | 1 0 37 37 | 14 33 27 | 0 23 45 30 | 1 3 58 34 | 16 8 59 |
| 29 | 11 26 2 9 | 1 0 44 24 | 14 36 41 | 1 7 7 45 | 1 4 5 11 | 16 12 8 |
| 30 | 0 9 24 17 | 1 0 51 11 | 14 39 54 | 1 20 30 0 | 1 4 11 47 | 16 15 16 |

## *MEDII MOTVS LVNÆ, APOGEI ET NODORVM AD GRADVS ANOMALIÆ MEDIÆ SOLIS.*

### *Anomalia Media Solis.*

| Gr. | Sig. X. Motus Medius Lunæ. | Mot. Apog. Lunæ. | Mot. Nod. Retrog. | Sig. XI. Motus Medius Lunæ. | Mot. Apog. Lunæ. | Mot. Nod. Retrog. |
|---|---|---|---|---|---|---|
| | S. o. ′ ″ | S. o. ′ ″ | o. ′ ″ | S. o. ′ ″ | S. o. ′ ″ | o. ′ ″ |
| 1 | 2 3 52 14 | 1 4 18 23 | 16 18 24 | 3 15 0 38 | 1 7 34 25 | 17 51 34 |
| 2 | 2 17 14 29 | 1 4 24 58 | 16 21 32 | 3 28 22 57 | 1 7 40 53 | 17 54 39 |
| 3 | 3 0 36 44 | 1 4 31 34 | 16 24 39 | 4 11 45 16 | 1 7 47 21 | 17 57 44 |
| 4 | 3 13 58 58 | 1 4 38 9 | 16 27 47 | 4 25 7 35 | 1 7 53 50 | 18 0 48 |
| 5 | 3 27 21 13 | 1 4 44 44 | 16 30 55 | 5 8 29 54 | 1 8 0 19 | 18 3 53 |
| 6 | 4 10 43 28 | 1 4 51 18 | 16 34 3 | 5 21 52 13 | 1 8 6 47 | 18 6 57 |
| 7 | 4 24 5 44 | 1 4 57 53 | 16 37 10 | 6 5 14 32 | 1 8 13 15 | 18 10 2 |
| 8 | 5 7 28 0 | 1 5 4 27 | 16 40 17 | 6 18 36 51 | 1 8 19 43 | 18 13 6 |
| 9 | 5 20 50 16 | 1 5 11 2 | 16 43 25 | 7 1 59 10 | 1 8 26 11 | 18 16 10 |
| 10 | 6 4 12 32 | 1 5 17 35 | 16 46 32 | 7 15 21 30 | 1 8 32 39 | 18 19 15 |
| 11 | 6 17 34 48 | 1 5 24 8 | 16 49 39 | 7 28 43 49 | 1 8 39 6 | 18 22 19 |
| 12 | 7 0 57 4 | 1 5 30 41 | 16 52 45 | 8 12 6 9 | 1 8 45 33 | 18 25 24 |
| 13 | 7 14 19 20 | 1 5 37 14 | 16 55 51 | 8 25 28 30 | 1 8 52 1 | 18 28 28 |
| 14 | 7 27 41 37 | 1 5 43 46 | 16 58 59 | 9 8 50 50 | 1 8 58 28 | 18 31 32 |
| 15 | 8 11 3 54 | 1 5 50 19 | 17 2 5 | 9 22 13 10 | 1 9 4 54 | 18 34 35 |
| 16 | 8 24 26 11 | 1 5 56 51 | 17 5 12 | 10 5 35 30 | 1 9 11 21 | 18 37 39 |
| 17 | 9 7 48 28 | 1 6 3 22 | 17 8 17 | 10 18 57 49 | 1 9 17 48 | 18 40 43 |
| 18 | 9 21 10 45 | 1 6 9 53 | 17 11 23 | 11 2 20 9 | 1 9 24 15 | 18 43 47 |
| 19 | 10 4 33 2 | 1 6 16 25 | 17 14 30 | 11 15 42 29 | 1 9 30 42 | 18 46 51 |
| 20 | 10 17 55 19 | 1 6 22 56 | 17 17 35 | 11 29 4 49 | 1 9 37 9 | 18 49 55 |
| 21 | 11 1 17 36 | 1 6 29 26 | 17 20 42 | 0 12 27 8 | 1 9 43 36 | 18 52 59 |
| 22 | 11 14 39 54 | 1 6 35 57 | 17 23 47 | 0 25 49 28 | 1 9 50 2 | 18 56 3 |
| 23 | 11 28 2 12 | 1 6 42 27 | 17 26 53 | 1 9 11 48 | 1 9 56 29 | 18 59 6 |
| 24 | 0 11 24 30 | 1 6 48 58 | 17 29 58 | 1 22 34 8 | 1 10 2 56 | 19 2 10 |
| 25 | 0 24 46 48 | 1 6 55 28 | 17 33 4 | 2 5 56 28 | 1 10 9 22 | 19 5 13 |
| 26 | 1 8 9 6 | 1 7 1 58 | 17 36 9 | 2 19 18 48 | 1 10 15 49 | 19 8 18 |
| 27 | 1 21 31 24 | 1 7 8 28 | 17 39 14 | 3 2 41 8 | 1 10 22 15 | 19 11 21 |
| 28 | 2 4 53 42 | 1 7 14 57 | 17 42 20 | 3 16 3 28 | 1 10 28 42 | 19 14 25 |
| 29 | 2 18 16 1 | 1 7 21 27 | 17 45 25 | 3 29 25 48 | 1 10 35 8 | 19 17 29 |
| 30 | 3 1 38 20 | 1 7 27 56 | 17 48 30 | 4 12 48 8 | 1 10 41 34 | 19 20 32 |

# *MEDII MOTUS LUNÆ, APOGEI ET NODORUM AD MINUTA ANOMALIÆ MEDIÆ SOLIS.*

| | *Mot. Med. Lunæ.* | | | *Apogei Lunæ.* | | | *Motus Nod.* ☽. | | |
|---|---|---|---|---|---|---|---|---|---|
| *Tert.* | ″ | ‴ | ⁗ | ″ | ‴ | ⁗ | ″ | ‴ | ⁗ |
| *Sec.* | ′ | ″ | ‴ | ′ | ″ | ‴ | ′ | ″ | ‴ |
| *Min.* | ○. | ′ | ″ | ○. | ′ | ″ | ○. | ′ | ″ |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 13 | 22 | 0 | 0 | 7 | 0 | 0 | 3 |
| 2 | 0 | 26 | 44 | 0 | 0 | 14 | 0 | 0 | 6 |
| 3 | 0 | 40 | 6 | 0 | 0 | 20 | 0 | 0 | 10 |
| 4 | 0 | 53 | 29 | 0 | 0 | 27 | 0 | 0 | 13 |
| 5 | 1 | 6 | 51 | 0 | 0 | 34 | 0 | 0 | 16 |
| 6 | 1 | 20 | 13 | 0 | 0 | 41 | 0 | 0 | 19 |
| 7 | 1 | 33 | 35 | 0 | 0 | 47 | 0 | 0 | 23 |
| 8 | 1 | 46 | 57 | 0 | 0 | 54 | 0 | 0 | 26 |
| 9 | 2 | 0 | 19 | 0 | 1 | 1 | 0 | 0 | 29 |
| 10 | 2 | 13 | 41 | 0 | 1 | 8 | 0 | 0 | 32 |
| 11 | 2 | 27 | 3 | 0 | 1 | 15 | 0 | 0 | 35 |
| 12 | 2 | 40 | 26 | 0 | 1 | 21 | 0 | 0 | 39 |
| 13 | 2 | 53 | 48 | 0 | 1 | 28 | 0 | 0 | 42 |
| 14 | 3 | 7 | 10 | 0 | 1 | 35 | 0 | 0 | 45 |
| 15 | 3 | 20 | 32 | 0 | 1 | 42 | 0 | 0 | 48 |
| 16 | 3 | 33 | 54 | 0 | 1 | 49 | 0 | 0 | 52 |
| 17 | 3 | 47 | 16 | 0 | 1 | 55 | 0 | 0 | 55 |
| 18 | 4 | 0 | 38 | 0 | 2 | 2 | 0 | 0 | 58 |
| 19 | 4 | 14 | 1 | 0 | 2 | 9 | 0 | 1 | 1 |
| 20 | 4 | 27 | 23 | 0 | 2 | 16 | 0 | 1 | 4 |
| 21 | 4 | 40 | 45 | 0 | 2 | 22 | 0 | 1 | 8 |
| 22 | 4 | 54 | 7 | 0 | 2 | 29 | 0 | 1 | 11 |
| 23 | 5 | 7 | 29 | 0 | 2 | 36 | 0 | 1 | 14 |
| 24 | 5 | 20 | 51 | 0 | 2 | 43 | 0 | 1 | 17 |
| 25 | 5 | 34 | 13 | 0 | 2 | 50 | 0 | 1 | 21 |
| 26 | 5 | 47 | 35 | 0 | 2 | 56 | 0 | 1 | 24 |
| 27 | 6 | 0 | 58 | 0 | 3 | 3 | 0 | 1 | 27 |
| 28 | 6 | 14 | 20 | 0 | 3 | 10 | 0 | 1 | 30 |
| 29 | 6 | 27 | 42 | 0 | 3 | 17 | 0 | 1 | 33 |
| 30 | 6 | 41 | 4 | 0 | 3 | 23 | 0 | 1 | 37 |

| | *Mot. Med. Lunæ.* | | | *Apogei Lunæ.* | | | *Motus Nod.* ☊. | | |
|---|---|---|---|---|---|---|---|---|---|
| *Anom. Solis.* | | | | | | | | | |
| *Tert.* | ″ | ‴ | ⁗ | ″ | ‴ | ⁗ | ″ | ‴ | ⁗ |
| *Sec.* | ′ | ″ | ‴ | ′ | ″ | ‴ | ′ | ″ | ‴ |
| *Min.* | ○. | ′ | ″ | ○. | ′ | ″ | ○. | ′ | ″ |
| 30 | 6 | 41 | 4 | 0 | 3 | 23 | 0 | 1 | 37 |
| 31 | 6 | 54 | 26 | 0 | 3 | 30 | 0 | 1 | 40 |
| 32 | 7 | 7 | 48 | 0 | 3 | 37 | 0 | 1 | 43 |
| 33 | 7 | 21 | 10 | 0 | 3 | 44 | 0 | 1 | 46 |
| 34 | 7 | 34 | 33 | 0 | 3 | 51 | 0 | 1 | 50 |
| 35 | 7 | 47 | 55 | 0 | 3 | 57 | 0 | 1 | 53 |
| 36 | 8 | 1 | 17 | 0 | 4 | 4 | 0 | 1 | 56 |
| 37 | 8 | 14 | 39 | 0 | 4 | 11 | 0 | 1 | 59 |
| 38 | 8 | 28 | 1 | 0 | 4 | 18 | 0 | 2 | 2 |
| 39 | 8 | 41 | 23 | 0 | 4 | 24 | 0 | 2 | 6 |
| 40 | 8 | 54 | 45 | 0 | 4 | 31 | 0 | 2 | 9 |
| 41 | 9 | 8 | 7 | 0 | 4 | 38 | 0 | 2 | 12 |
| 42 | 9 | 21 | 30 | 0 | 4 | 45 | 0 | 2 | 15 |
| 43 | 9 | 34 | 52 | 0 | 4 | 52 | 0 | 2 | 19 |
| 44 | 9 | 48 | 14 | 0 | 4 | 58 | 0 | 2 | 22 |
| 45 | 10 | 1 | 36 | 0 | 5 | 5 | 0 | 2 | 25 |
| 46 | 10 | 14 | 58 | 0 | 5 | 12 | 0 | 2 | 28 |
| 47 | 10 | 28 | 20 | 0 | 5 | 19 | 0 | 2 | 32 |
| 48 | 10 | 41 | 42 | 0 | 5 | 26 | 0 | 2 | 35 |
| 49 | 10 | 55 | 5 | 0 | 5 | 32 | 0 | 2 | 38 |
| 50 | 11 | 8 | 27 | 0 | 5 | 39 | 0 | 2 | 41 |
| 51 | 11 | 21 | 49 | 0 | 5 | 46 | 0 | 2 | 44 |
| 52 | 11 | 35 | 11 | 0 | 5 | 53 | 0 | 2 | 48 |
| 53 | 11 | 48 | 33 | 0 | 5 | 59 | 0 | 2 | 51 |
| 54 | 12 | 1 | 55 | 0 | 6 | 6 | 0 | 2 | 54 |
| 55 | 12 | 15 | 17 | 0 | 6 | 13 | 0 | 2 | 57 |
| 56 | 12 | 28 | 39 | 0 | 6 | 20 | 0 | 3 | 1 |
| 57 | 12 | 42 | 2 | 0 | 6 | 27 | 0 | 3 | 4 |
| 58 | 12 | 55 | 24 | 0 | 6 | 33 | 0 | 3 | 7 |
| 59 | 13 | 8 | 46 | 0 | 6 | 40 | 0 | 3 | 10 |
| 60 | 13 | 22 | 8 | 0 | 6 | 47 | 0 | 3 | 13 |

## TABULA MEDII MOTUS LUNÆ, APOGEI ET NODORUM AB ÆQUINOCTIO, AC LUNÆ A SOLE.

### IN CENTURIIS ANNORUM ANOMALISTICORUM.

| Annis Anomalisticis. | Motus Medius Lunæ. | | | | Motus Apogei Lunæ. | | | | Motus Nodorum Lunæ Retrog. | | | | Motus Lunæ a Sole. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S. | o. | ′ | ″ | S. | o. | ′ | ″ | S. | o. | ′ | ″ | S. | o. | ′ | ″ |
| 100 | 10 | 20 | 13 | 25 | 3 | 19 | 17 | 30 | 4 | 14 | 14 | 10 | 10 | 18 | 32 | 18 |
| 200 | 9 | 10 | 26 | 50 | 7 | 8 | 35 | 0 | 8 | 28 | 28 | 20 | 9 | 7 | 4 | 37 |
| 300 | 8 | 0 | 40 | 15 | 10 | 27 | 52 | 30 | 1 | 12 | 42 | 30 | 7 | 25 | 36 | 55 |
| 400 | 6 | 20 | 53 | 40 | 2 | 17 | 10 | 0 | 5 | 26 | 56 | 40 | 6 | 14 | 9 | 13 |
| 500 | 5 | 11 | 7 | 5 | 6 | 6 | 27 | 30 | 10 | 11 | 10 | 50 | 5 | 2 | 41 | 32 |
| 600 | 4 | 1 | 20 | 30 | 9 | 25 | 45 | 0 | 2 | 25 | 25 | 0 | 3 | 21 | 13 | 50 |
| 700 | 2 | 21 | 33 | 55 | 1 | 15 | 2 | 30 | 7 | 9 | 39 | 10 | 2 | 9 | 46 | 8 |
| 800 | 1 | 11 | 47 | 20 | 5 | 4 | 20 | 0 | 11 | 23 | 53 | 20 | 0 | 28 | 18 | 27 |
| 900 | 0 | 2 | 0 | 45 | 8 | 23 | 37 | 30 | 4 | 8 | 7 | 30 | 11 | 16 | 50 | 45 |
| 1000 | 10 | 22 | 14 | 10 | 0 | 12 | 55 | 0 | 8 | 22 | 21 | 40 | 10 | 5 | 23 | 3 |
| 1100 | 9 | 12 | 27 | 35 | 4 | 2 | 12 | 30 | 1 | 6 | 35 | 50 | 8 | 23 | 55 | 22 |
| 1200 | 8 | 2 | 41 | 0 | 7 | 21 | 30 | 0 | 5 | 20 | 50 | 0 | 7 | 12 | 27 | 40 |
| 1300 | 6 | 22 | 54 | 25 | 11 | 10 | 47 | 30 | 10 | 5 | 4 | 10 | 6 | 0 | 59 | 58 |
| 1400 | 5 | 13 | 7 | 50 | 3 | 0 | 5 | 0 | 2 | 19 | 18 | 20 | 4 | 19 | 32 | 17 |
| 1500 | 4 | 3 | 21 | 15 | 6 | 19 | 22 | 30 | 7 | 3 | 32 | 30 | 3 | 8 | 4 | 35 |
| 1600 | 2 | 23 | 34 | 40 | 10 | 8 | 40 | 0 | 11 | 17 | 46 | 40 | 1 | 26 | 36 | 53 |
| 1700 | 1 | 13 | 48 | 5 | 1 | 27 | 57 | 30 | 4 | 2 | 0 | 50 | 0 | 15 | 9 | 12 |
| 1800 | 0 | 4 | 1 | 30 | 5 | 17 | 15 | 0 | 8 | 16 | 15 | 0 | 11 | 3 | 41 | 30 |
| 1900 | 10 | 24 | 14 | 55 | 9 | 6 | 32 | 30 | 1 | 0 | 29 | 10 | 9 | 22 | 13 | 48 |
| 2000 | 9 | 14 | 28 | 20 | 0 | 25 | 50 | 0 | 5 | 14 | 43 | 20 | 8 | 10 | 46 | 7 |
| 2100 | 8 | 4 | 41 | 45 | 4 | 15 | 7 | 30 | 9 | 28 | 57 | 30 | 6 | 29 | 18 | 25 |
| 2200 | 6 | 24 | 55 | 10 | 8 | 4 | 25 | 0 | 2 | 13 | 11 | 40 | 5 | 17 | 50 | 43 |
| 2300 | 5 | 15 | 8 | 35 | 11 | 23 | 42 | 30 | 6 | 27 | 25 | 50 | 4 | 6 | 23 | 2 |
| 2400 | 4 | 5 | 22 | 0 | 3 | 13 | 0 | 0 | 11 | 11 | 40 | 0 | 2 | 24 | 55 | 20 |
| 2500 | 2 | 25 | 35 | 25 | 7 | 2 | 17 | 30 | 3 | 25 | 54 | 10 | 1 | 13 | 27 | 38 |
| 2600 | 1 | 15 | 48 | 50 | 10 | 21 | 35 | 0 | 8 | 10 | 8 | 20 | 0 | 1 | 59 | 57 |
| 2700 | 0 | 6 | 2 | 15 | 2 | 10 | 52 | 30 | 0 | 24 | 22 | 30 | 10 | 20 | 32 | 15 |
| 2800 | 10 | 26 | 15 | 40 | 6 | 0 | 10 | 0 | 5 | 8 | 36 | 40 | 9 | 9 | 4 | 33 |
| 2900 | 9 | 16 | 29 | 5 | 9 | 19 | 27 | 30 | 9 | 22 | 50 | 50 | 7 | 27 | 36 | 52 |
| 3000 | 8 | 6 | 42 | 30 | 1 | 8 | 45 | 0 | 2 | 7 | 5 | 0 | 6 | 16 | 9 | 10 |
| 3100 | 6 | 26 | 55 | 55 | 4 | 28 | 2 | 30 | 6 | 21 | 19 | 10 | 5 | 4 | 41 | 28 |
| 3200 | 5 | 17 | 9 | 20 | 8 | 17 | 20 | 0 | 11 | 5 | 33 | 20 | 3 | 23 | 13 | 47 |

# EPOCHÆ MEDIORUM MOTUUM LUNÆ
## Et Apogei ejus. Annis Julianis ineuntibus.

| Annis Julianis ineuntibus. | Luna ab Æquinoctio. | | | | Apog. Lunæ ab Æquinoctio. | | | |
|---|---|---|---|---|---|---|---|---|
| | S. | o. | ′ | ″ | S. | o. | ′ | ″ |
| 1661 | 1 | 18 | 11 | 50 | 5 | 0 | 39 | 30 |
| 62 | 5 | 27 | 34 | 53 | 6 | 11 | 19 | 21 |
| 63 | 10 | 6 | 57 | 57 | 7 | 21 | 59 | 11 |
| 64 | 2 | 16 | 21 | 0 | 9 | 2 | 39 | 2 |
| 1665 | 7 | 8 | 54 | 39 | 10 | 13 | 25 | 33 |
| 1666 | 11 | 18 | 17 | 42 | 11 | 24 | 5 | 24 |
| 67 | 3 | 27 | 40 | 46 | 1 | 4 | 45 | 14 |
| 68 | 8 | 7 | 3 | 49 | 2 | 15 | 25 | 5 |
| 69 | 0 | 29 | 37 | 28 | 3 | 26 | 11 | 36 |
| 1670 | 5 | 9 | 0 | 31 | 5 | 6 | 51 | 27 |
| 1671 | 9 | 18 | 23 | 35 | 6 | 17 | 31 | 17 |
| 72 | 1 | 27 | 46 | 38 | 7 | 28 | 11 | 8 |
| 73 | 6 | 20 | 20 | 17 | 9 | 8 | 57 | 39 |
| 74 | 10 | 29 | 43 | 20 | 10 | 19 | 37 | 30 |
| 1675 | 3 | 9 | 6 | 24 | 0 | 0 | 17 | 20 |
| 1676 | 7 | 18 | 29 | 27 | 1 | 10 | 57 | 11 |
| 77 | 0 | 11 | 3 | 6 | 2 | 21 | 43 | 42 |
| 78 | 4 | 20 | 26 | 9 | 4 | 2 | 23 | 33 |
| 79 | 8 | 29 | 49 | 13 | 5 | 13 | 3 | 23 |
| 1680 | 1 | 9 | 12 | 16 | 6 | 23 | 43 | 14 |
| 1681 | 6 | 1 | 45 | 55 | 8 | 4 | 29 | 45 |
| 82 | 10 | 11 | 8 | 58 | 9 | 15 | 9 | 36 |
| 83 | 2 | 20 | 32 | 2 | 10 | 25 | 49 | 26 |
| 84 | 6 | 29 | 55 | 5 | 0 | 6 | 29 | 17 |
| 1685 | 11 | 22 | 28 | 44 | 1 | 17 | 15 | 48 |
| 1686 | 4 | 1 | 51 | 47 | 2 | 27 | 55 | 39 |
| 87 | 8 | 11 | 14 | 51 | 4 | 8 | 35 | 29 |
| 88 | 0 | 20 | 37 | 54 | 5 | 19 | 15 | 20 |
| 89 | 5 | 13 | 11 | 33 | 7 | 0 | 1 | 51 |
| 1690 | 9 | 22 | 34 | 36 | 8 | 10 | 41 | 42 |
| 1691 | 2 | 1 | 57 | 40 | 9 | 21 | 21 | 32 |
| 92 | 6 | 11 | 20 | 43 | 11 | 2 | 1 | 23 |
| 93 | 11 | 3 | 54 | 22 | 0 | 12 | 47 | 54 |
| 94 | 3 | 13 | 17 | 25 | 1 | 23 | 27 | 45 |
| 1695 | 7 | 22 | 40 | 29 | 3 | 4 | 7 | 35 |
| 1696 | 0 | 2 | 3 | 32 | 4 | 14 | 47 | 26 |
| 97 | 4 | 24 | 37 | 11 | 5 | 25 | 33 | 57 |
| 98 | 9 | 4 | 0 | 14 | 7 | 6 | 13 | 48 |
| 99 | 1 | 13 | 23 | 18 | 8 | 16 | 53 | 38 |
| 1700 | 5 | 22 | 46 | 21 | 9 | 27 | 33 | 29 |
| 1701 | 10 | 15 | 20 | 0 | 11 | 8 | 20 | 0 |
| 2 | 2 | 24 | 43 | 3 | 0 | 18 | 59 | 51 |
| 3 | 7 | 4 | 6 | 7 | 1 | 29 | 39 | 41 |
| 4 | 11 | 13 | 29 | 10 | 3 | 10 | 19 | 32 |
| 1705 | 4 | 6 | 2 | 49 | 4 | 21 | 6 | 3 |
| 1706 | 8 | 15 | 25 | 52 | 6 | 1 | 45 | 54 |
| 7 | 0 | 24 | 48 | 56 | 7 | 12 | 25 | 44 |
| 8 | 5 | 4 | 11 | 59 | 8 | 23 | 5 | 35 |
| 9 | 9 | 26 | 45 | 38 | 10 | 3 | 52 | 6 |
| 1710 | 2 | 6 | 8 | 41 | 11 | 14 | 31 | 57 |
| 1711 | 6 | 15 | 31 | 45 | 0 | 25 | 11 | 47 |
| 12 | 10 | 24 | 54 | 48 | 2 | 5 | 51 | 38 |
| 13 | 3 | 17 | 28 | 27 | 3 | 16 | 38 | 9 |
| 14 | 7 | 26 | 51 | 30 | 4 | 27 | 18 | 0 |
| 1715 | 0 | 6 | 14 | 34 | 6 | 7 | 57 | 50 |
| 1716 | 4 | 15 | 37 | 37 | 7 | 18 | 37 | 41 |
| 17 | 9 | 8 | 11 | 16 | 8 | 29 | 24 | 12 |
| 18 | 1 | 17 | 34 | 19 | 10 | 10 | 4 | 3 |
| 19 | 5 | 26 | 57 | 23 | 11 | 20 | 43 | 53 |
| 1720 | 10 | 6 | 20 | 26 | 1 | 1 | 23 | 44 |
| 1721 | 2 | 28 | 54 | 5 | 2 | 12 | 10 | 15 |
| 22 | 7 | 8 | 17 | 8 | 3 | 22 | 50 | 6 |
| 23 | 11 | 17 | 40 | 12 | 5 | 3 | 29 | 56 |
| 24 | 3 | 27 | 3 | 15 | 6 | 14 | 9 | 47 |
| 1725 | 8 | 19 | 36 | 54 | 7 | 24 | 56 | 18 |
| 1726 | 0 | 28 | 59 | 57 | 9 | 5 | 36 | 9 |
| 27 | 5 | 8 | 23 | 1 | 10 | 16 | 15 | 59 |
| 28 | 9 | 17 | 46 | 4 | 11 | 26 | 55 | 50 |
| 29 | 2 | 10 | 19 | 43 | 1 | 7 | 42 | 21 |
| 1730 | 6 | 19 | 42 | 46 | 2 | 18 | 22 | 12 |

## EPOCHÆ MEDIORUM MOTUUM LUNÆ
## Et Apogei ejus. Annis Julianis ineuntibus.

| Annis Julianis ineuntibus. | Luna ab Æquinoctio. | | | | Apog. Lunæ ab Æquinoctio. | | | |
|---|---|---|---|---|---|---|---|---|
| | S. | o. | ′ | ″ | S. | o. | ′ | ″ |
| 1731 | 10 | 29 | 5 | 50 | 3 | 29 | 2 | 2 |
| 32 | 3 | 8 | 28 | 53 | 5 | 9 | 41 | 53 |
| 33 | 8 | 1 | 2 | 32 | 6 | 20 | 28 | 24 |
| 34 | 0 | 10 | 25 | 35 | 8 | 1 | 8 | 15 |
| 1735 | 4 | 19 | 48 | 39 | 9 | 11 | 48 | 5 |
| 1736 | 8 | 29 | 11 | 42 | 10 | 22 | 27 | 56 |
| 37 | 1 | 21 | 45 | 21 | 0 | 3 | 14 | 27 |
| 38 | 6 | 1 | 8 | 24 | 1 | 13 | 54 | 18 |
| 39 | 10 | 10 | 31 | 28 | 2 | 24 | 34 | 8 |
| 1740 | 2 | 19 | 54 | 31 | 4 | 5 | 13 | 59 |
| 1741 | 7 | 12 | 28 | 10 | 5 | 16 | 0 | 30 |
| 42 | 11 | 21 | 51 | 13 | 6 | 26 | 40 | 21 |
| 43 | 4 | 1 | 14 | 17 | 8 | 7 | 20 | 11 |
| 44 | 8 | 10 | 37 | 20 | 9 | 18 | 0 | 2 |
| 1745 | 1 | 3 | 10 | 59 | 10 | 28 | 46 | 33 |
| 1746 | 5 | 12 | 34 | 2 | 0 | 9 | 26 | 24 |
| 47 | 9 | 21 | 57 | 6 | 1 | 20 | 6 | 14 |
| 48 | 2 | 1 | 20 | 9 | 3 | 0 | 46 | 5 |
| 49 | 6 | 23 | 53 | 48 | 4 | 11 | 32 | 36 |
| 1750 | 11 | 3 | 16 | 51 | 5 | 22 | 12 | 27 |
| 1751 | 3 | 12 | 39 | 55 | 7 | 2 | 52 | 17 |
| 52 | 7 | 22 | 2 | 58 | 8 | 13 | 32 | 8 |
| 53 | 0 | 14 | 36 | 37 | 9 | 24 | 18 | 39 |
| 54 | 4 | 23 | 59 | 40 | 11 | 4 | 58 | 30 |
| 1755 | 9 | 3 | 22 | 44 | 0 | 15 | 38 | 20 |
| 1756 | 1 | 12 | 45 | 47 | 1 | 26 | 18 | 11 |
| 57 | 6 | 5 | 19 | 26 | 3 | 7 | 4 | 42 |
| 58 | 10 | 14 | 42 | 29 | 4 | 17 | 44 | 33 |
| 59 | 2 | 24 | 5 | 33 | 5 | 28 | 24 | 23 |
| 1760 | 7 | 3 | 28 | 36 | 7 | 9 | 4 | 14 |
| 1761 | 11 | 26 | 2 | 15 | 8 | 19 | 50 | 45 |
| 62 | 4 | 5 | 25 | 18 | 10 | 0 | 30 | 36 |
| 63 | 8 | 14 | 48 | 22 | 11 | 11 | 10 | 26 |
| 64 | 0 | 24 | 11 | 25 | 0 | 21 | 50 | 17 |
| 1765 | 5 | 16 | 45 | 4 | 2 | 2 | 36 | 48 |

| Annis Julianis ineuntibus. | Luna ab Æquinoctio. | | | | Apog. Lunæ ab Æquinoctio. | | | |
|---|---|---|---|---|---|---|---|---|
| | S. | o. | ′ | ″ | S. | o. | ′ | ″ |
| 1766 | 9 | 26 | 8 | 7 | 3 | 13 | 16 | 39 |
| 67 | 2 | 5 | 31 | 11 | 4 | 23 | 56 | 29 |
| 68 | 6 | 14 | 54 | 14 | 6 | 4 | 36 | 20 |
| 69 | 11 | 7 | 27 | 53 | 7 | 15 | 22 | 51 |
| 1770 | 3 | 16 | 50 | 56 | 8 | 26 | 2 | 42 |
| 1771 | 7 | 26 | 14 | 0 | 10 | 6 | 42 | 32 |
| 72 | 0 | 5 | 37 | 3 | 11 | 17 | 22 | 23 |
| 73 | 4 | 28 | 10 | 42 | 0 | 28 | 8 | 54 |
| 74 | 9 | 7 | 33 | 45 | 2 | 8 | 48 | 45 |
| 1775 | 1 | 16 | 56 | 49 | 3 | 19 | 28 | 35 |
| 1776 | 5 | 26 | 19 | 52 | 5 | 0 | 8 | 26 |
| 77 | 10 | 18 | 53 | 31 | 6 | 10 | 54 | 57 |
| 78 | 2 | 28 | 16 | 34 | 7 | 21 | 34 | 48 |
| 79 | 7 | 7 | 39 | 38 | 9 | 2 | 14 | 38 |
| 1780 | 11 | 17 | 2 | 41 | 10 | 12 | 54 | 29 |
| 1781 | 4 | 9 | 36 | 20 | 11 | 23 | 41 | 0 |
| 82 | 8 | 18 | 59 | 23 | 1 | 4 | 20 | 51 |
| 83 | 0 | 28 | 22 | 27 | 2 | 15 | 0 | 41 |
| 84 | 5 | 7 | 45 | 30 | 3 | 25 | 40 | 32 |
| 1785 | 10 | 0 | 19 | 9 | 5 | 6 | 27 | 3 |
| 1786 | 2 | 9 | 42 | 12 | 6 | 17 | 6 | 54 |
| 87 | 6 | 19 | 5 | 16 | 7 | 27 | 46 | 44 |
| 88 | 10 | 28 | 28 | 19 | 9 | 8 | 26 | 35 |
| 89 | 3 | 21 | 1 | 58 | 10 | 19 | 13 | 6 |
| 1790 | 8 | 0 | 25 | 1 | 11 | 29 | 52 | 57 |
| 1791 | 0 | 9 | 48 | 5 | 1 | 10 | 32 | 47 |
| 92 | 4 | 19 | 11 | 8 | 2 | 21 | 12 | 38 |
| 93 | 9 | 11 | 44 | 47 | 4 | 1 | 59 | 9 |
| 94 | 1 | 21 | 7 | 50 | 5 | 12 | 39 | 0 |
| 1795 | 6 | 0 | 30 | 54 | 6 | 23 | 18 | 50 |
| 1796 | 10 | 9 | 53 | 57 | 8 | 3 | 58 | 41 |
| 97 | 3 | 2 | 27 | 36 | 9 | 14 | 45 | 12 |
| 98 | 7 | 11 | 50 | 39 | 10 | 25 | 25 | 3 |
| 99 | 11 | 21 | 13 | 43 | 0 | 6 | 4 | 53 |
| 1800 | 4 | 0 | 36 | 46 | 1 | 16 | 44 | 44 |

## EPOCHÆ MOTVS NODI ASCENDENTIS LVNÆ
## *Annis Julianis ineuntibus.*

| *Annis Juli-anis ineun-tibus.* | *Nodus ☽ Ascend. ab Æquinoct.* | | | | *Annis Juli-anis ineun-tibus.* | *Nodus ☽ Ascend. ab Æquinoct.* | | | | *Annis Juli-anis ineun-tibus.* | *Nodus ☽ Ascend. ab Æquinoct.* | | | | *Annis Juli-anis ineun-tibus.* | *Nodus ☽ Ascend. ab Æquinoct.* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *S.* | *o.* | *'* | *''* | | *S.* | *o.* | *'* | *''* | | *S.* | *o.* | *'* | *''* | | *S.* | *o.* | *'* | *''* |
| 1661 | 6 | 21 | 3 | 50 | 1696 | 8 | 4 | 8 | 17 | 1731 | 9 | 17 | 9 | 33 | 1766 | 11 | 0 | 10 | 49 |
| 62 | 6 | 1 | 44 | 7 | 97 | 7 | 14 | 45 | 23 | 32 | 8 | 27 | 49 | 50 | 67 | 10 | 10 | 51 | 6 |
| 63 | 5 | 12 | 24 | 24 | 98 | 6 | 25 | 25 | 40 | 33 | 8 | 8 | 26 | 56 | 68 | 9 | 21 | 31 | 23 |
| 64 | 4 | 23 | 4 | 41 | 99 | 6 | 6 | 5 | 57 | 34 | 7 | 19 | 7 | 13 | 69 | 9 | 2 | 8 | 29 |
| 1665 | 4 | 3 | 41 | 47 | 1700 | 5 | 16 | 46 | 14 | 1735 | 6 | 29 | 47 | 30 | 1770 | 8 | 12 | 48 | 46 |
| 1666 | 3 | 14 | 22 | 4 | 1701 | 4 | 27 | 23 | 20 | 1736 | 6 | 10 | 27 | 47 | 1771 | 7 | 23 | 29 | 3 |
| 67 | 2 | 25 | 2 | 21 | 2 | 4 | 8 | 3 | 37 | 37 | 5 | 21 | 4 | 53 | 72 | 7 | 4 | 9 | 20 |
| 68 | 2 | 5 | 42 | 38 | 3 | 3 | 18 | 43 | 54 | 38 | 5 | 1 | 45 | 10 | 73 | 6 | 14 | 46 | 26 |
| 69 | 1 | 16 | 19 | 44 | 4 | 2 | 29 | 24 | 11 | 39 | 4 | 12 | 25 | 27 | 74 | 5 | 25 | 26 | 43 |
| 1670 | 0 | 27 | 0 | 1 | 1705 | 2 | 10 | 1 | 17 | 1740 | 3 | 23 | 5 | 44 | 1775 | 5 | 6 | 7 | 0 |
| 1671 | 0 | 7 | 40 | 18 | 1706 | 1 | 20 | 41 | 34 | 1741 | 3 | 3 | 42 | 50 | 1776 | 4 | 16 | 47 | 17 |
| 72 | 11 | 18 | 20 | 35 | 7 | 1 | 1 | 21 | 51 | 42 | 2 | 14 | 23 | 7 | 77 | 3 | 27 | 24 | 23 |
| 73 | 10 | 28 | 57 | 41 | 8 | 0 | 12 | 2 | 8 | 43 | 1 | 25 | 3 | 24 | 78 | 3 | 8 | 4 | 40 |
| 74 | 10 | 9 | 37 | 58 | 9 | 11 | 22 | 39 | 14 | 44 | 1 | 5 | 43 | 41 | 79 | 2 | 18 | 44 | 57 |
| 1675 | 9 | 20 | 18 | 15 | 1710 | 11 | 3 | 19 | 31 | 1745 | 0 | 16 | 20 | 47 | 1780 | 1 | 29 | 25 | 14 |
| 1676 | 9 | 0 | 58 | 32 | 1711 | 10 | 13 | 59 | 48 | 1746 | 11 | 27 | 1 | 4 | 1781 | 1 | 10 | 2 | 20 |
| 77 | 8 | 11 | 35 | 38 | 12 | 9 | 24 | 40 | 5 | 47 | 11 | 7 | 41 | 21 | 82 | 0 | 20 | 42 | 37 |
| 78 | 7 | 22 | 15 | 55 | 13 | 9 | 5 | 17 | 11 | 48 | 10 | 18 | 21 | 38 | 83 | 0 | 1 | 22 | 54 |
| 79 | 7 | 2 | 56 | 12 | 14 | 8 | 15 | 57 | 28 | 49 | 9 | 28 | 58 | 44 | 84 | 11 | 12 | 3 | 11 |
| 1680 | 6 | 13 | 36 | 29 | 1715 | 7 | 26 | 37 | 45 | 1750 | 9 | 9 | 39 | 1 | 1785 | 10 | 22 | 40 | 17 |
| 1681 | 5 | 24 | 13 | 35 | 1716 | 7 | 7 | 18 | 2 | 1751 | 8 | 20 | 19 | 18 | 1786 | 10 | 3 | 20 | 34 |
| 82 | 5 | 4 | 53 | 52 | 17 | 6 | 17 | 55 | 8 | 52 | 8 | 0 | 59 | 35 | 87 | 9 | 14 | 0 | 51 |
| 83 | 4 | 15 | 34 | 9 | 18 | 5 | 28 | 35 | 25 | 53 | 7 | 11 | 36 | 41 | 88 | 8 | 24 | 41 | 8 |
| 84 | 3 | 26 | 14 | 26 | 19 | 5 | 9 | 15 | 42 | 54 | 6 | 22 | 16 | 58 | 89 | 8 | 5 | 18 | 14 |
| 1685 | 3 | 6 | 51 | 32 | 1720 | 4 | 19 | 55 | 59 | 1755 | 6 | 2 | 57 | 15 | 1790 | 7 | 15 | 58 | 31 |
| 1686 | 2 | 17 | 31 | 49 | 1721 | 4 | 0 | 33 | 5 | 1756 | 5 | 13 | 37 | 32 | 1791 | 6 | 26 | 38 | 48 |
| 87 | 1 | 28 | 12 | 6 | 22 | 3 | 11 | 13 | 22 | 57 | 4 | 24 | 14 | 38 | 92 | 6 | 7 | 19 | 5 |
| 88 | 1 | 8 | 52 | 23 | 23 | 2 | 21 | 53 | 39 | 58 | 4 | 4 | 54 | 55 | 93 | 5 | 17 | 56 | 11 |
| 89 | 0 | 19 | 29 | 29 | 24 | 2 | 2 | 33 | 56 | 59 | 3 | 15 | 35 | 12 | 94 | 4 | 28 | 36 | 28 |
| 1690 | 0 | 0 | 9 | 46 | 1725 | 1 | 13 | 11 | 2 | 1760 | 2 | 26 | 15 | 29 | 1795 | 4 | 9 | 16 | 45 |
| 1691 | 11 | 10 | 50 | 3 | 1726 | 0 | 23 | 51 | 19 | 1761 | 2 | 6 | 52 | 35 | 1796 | 3 | 19 | 57 | 2 |
| 92 | 10 | 21 | 30 | 20 | 27 | 0 | 4 | 31 | 36 | 62 | 1 | 17 | 32 | 52 | 97 | 3 | 0 | 34 | 8 |
| 93 | 10 | 2 | 7 | 26 | 28 | 11 | 15 | 11 | 53 | 63 | 0 | 28 | 13 | 9 | 98 | 2 | 11 | 14 | 25 |
| 94 | 9 | 12 | 47 | 43 | 29 | 10 | 25 | 48 | 59 | 64 | 0 | 8 | 53 | 26 | 99 | 1 | 21 | 54 | 42 |
| 1695 | 8 | 23 | 28 | 0 | 1730 | 10 | 6 | 29 | 16 | 1765 | 11 | 19 | 30 | 32 | 1800 | 1 | 2 | 34 | 59 |

## *MEDII MOTUS LUNÆ, APOGEI ET NODORUM EJUS AD DIES MENSIUM.*

### JANUARII.

| *Die Mensis.* | *Motus Medius Lunæ.* | | | | *Motus Apogei.* | | | *Mot. Nod. Retrog.* | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *S.* | *o.* | *'* | *''* | *o.* | *'* | *''* | *o.* | *'* | *''* |
| 1 | 0 | 13 | 10 | 35 | 0 | 6 | 41 | 0 | 3 | 11 |
| 2 | 0 | 26 | 21 | 10 | 0 | 13 | 22 | 0 | 6 | 21 |
| 3 | 1 | 9 | 31 | 45 | 0 | 20 | 3 | 0 | 9 | 32 |
| 4 | 1 | 22 | 42 | 20 | 0 | 26 | 44 | 0 | 12 | 43 |
| 5 | 2 | 5 | 52 | 55 | 0 | 33 | 25 | 0 | 15 | 53 |
| 6 | 2 | 19 | 3 | 30 | 0 | 40 | 6 | 0 | 19 | 4 |
| 7 | 3 | 2 | 14 | 5 | 0 | 46 | 47 | 0 | 22 | 14 |
| 8 | 3 | 15 | 24 | 40 | 0 | 53 | 29 | 0 | 25 | 25 |
| 9 | 3 | 28 | 35 | 15 | 1 | 0 | 10 | 0 | 28 | 36 |
| 10 | 4 | 11 | 45 | 50 | 1 | 6 | 51 | 0 | 31 | 46 |
| 11 | 4 | 24 | 56 | 25 | 1 | 13 | 32 | 0 | 34 | 57 |
| 12 | 5 | 8 | 7 | 0 | 1 | 20 | 13 | 0 | 38 | 8 |
| 13 | 5 | 21 | 17 | 35 | 1 | 26 | 54 | 0 | 41 | 18 |
| 14 | 6 | 4 | 28 | 10 | 1 | 33 | 35 | 0 | 44 | 29 |
| 15 | 6 | 17 | 38 | 45 | 1 | 40 | 16 | 0 | 47 | 40 |
| 16 | 7 | 0 | 49 | 20 | 1 | 46 | 57 | 0 | 50 | 50 |
| 17 | 7 | 13 | 59 | 55 | 1 | 53 | 38 | 0 | 54 | 1 |
| 18 | 7 | 27 | 10 | 30 | 2 | 0 | 19 | 0 | 57 | 12 |
| 19 | 8 | 10 | 21 | 5 | 2 | 7 | 0 | 1 | 0 | 22 |
| 20 | 8 | 23 | 31 | 40 | 2 | 13 | 41 | 1 | 3 | 33 |
| 21 | 9 | 6 | 42 | 15 | 2 | 20 | 22 | 1 | 6 | 43 |
| 22 | 9 | 19 | 52 | 50 | 2 | 27 | 3 | 1 | 9 | 54 |
| 23 | 10 | 3 | 3 | 25 | 2 | 33 | 45 | 1 | 13 | 5 |
| 24 | 10 | 16 | 14 | 0 | 2 | 40 | 26 | 1 | 16 | 15 |
| 25 | 10 | 29 | 24 | 36 | 2 | 47 | 7 | 1 | 19 | 26 |
| 26 | 11 | 12 | 35 | 11 | 2 | 53 | 48 | 1 | 22 | 37 |
| 27 | 11 | 25 | 45 | 46 | 3 | 0 | 29 | 1 | 25 | 47 |
| 28 | 0 | 8 | 56 | 21 | 3 | 7 | 10 | 1 | 28 | 58 |
| 29 | 0 | 22 | 6 | 56 | 3 | 13 | 51 | 1 | 32 | 9 |
| 30 | 1 | 5 | 17 | 31 | 3 | 20 | 32 | 1 | 35 | 19 |
| 31 | 1 | 18 | 28 | 6 | 3 | 27 | 13 | 1 | 38 | 30 |

### FEBRUARII.

| *Motus Medius Lunæ.* | | | | *Motus Apogei.* | | | *Mot. Nod. Retrog.* | | |
|---|---|---|---|---|---|---|---|---|---|
| *S.* | *o.* | *'* | *''* | *o.* | *'* | *''* | *o.* | *'* | *''* |
| 2 | 1 | 38 | 41 | 3 | 33 | 54 | 1 | 41 | 41 |
| 2 | 14 | 49 | 16 | 3 | 40 | 35 | 1 | 44 | 52 |
| 2 | 27 | 59 | 51 | 3 | 47 | 16 | 1 | 48 | 2 |
| 3 | 11 | 10 | 26 | 3 | 53 | 57 | 1 | 51 | 13 |
| 3 | 24 | 21 | 1 | 4 | 0 | 37 | 1 | 54 | 24 |
| 4 | 7 | 31 | 36 | 4 | 7 | 18 | 1 | 57 | 34 |
| 4 | 20 | 42 | 11 | 4 | 14 | 0 | 2 | 0 | 45 |
| 5 | 3 | 52 | 46 | 4 | 20 | 41 | 2 | 3 | 55 |
| 5 | 17 | 3 | 21 | 4 | 27 | 22 | 2 | 7 | 6 |
| 6 | 0 | 13 | 56 | 4 | 34 | 3 | 2 | 10 | 17 |
| 6 | 13 | 24 | 31 | 4 | 40 | 44 | 2 | 13 | 27 |
| 6 | 26 | 35 | 6 | 4 | 47 | 25 | 2 | 16 | 38 |
| 7 | 9 | 45 | 41 | 4 | 54 | 6 | 2 | 19 | 49 |
| 7 | 22 | 56 | 16 | 5 | 0 | 47 | 2 | 22 | 59 |
| 8 | 6 | 6 | 51 | 5 | 7 | 28 | 2 | 26 | 10 |
| 8 | 19 | 17 | 26 | 5 | 14 | 9 | 2 | 29 | 21 |
| 9 | 2 | 28 | 1 | 5 | 20 | 50 | 2 | 32 | 31 |
| 9 | 15 | 38 | 36 | 5 | 27 | 31 | 2 | 35 | 42 |
| 9 | 28 | 49 | 11 | 5 | 34 | 12 | 2 | 38 | 53 |
| 10 | 11 | 59 | 46 | 5 | 40 | 54 | 2 | 42 | 3 |
| 10 | 25 | 10 | 21 | 5 | 47 | 35 | 2 | 45 | 14 |
| 11 | 8 | 20 | 56 | 5 | 54 | 16 | 2 | 48 | 24 |
| 11 | 21 | 31 | 31 | 6 | 0 | 57 | 2 | 51 | 35 |
| 0 | 4 | 42 | 6 | 6 | 7 | 38 | 2 | 54 | 45 |
| 0 | 17 | 52 | 41 | 6 | 14 | 19 | 2 | 57 | 56 |
| 1 | 1 | 3 | 16 | 6 | 21 | 0 | 3 | 1 | 7 |
| 1 | 14 | 13 | 51 | 6 | 27 | 41 | 3 | 4 | 18 |
| 1 | 27 | 24 | 26 | 6 | 34 | 22 | 3 | 7 | 28 |

*In Anno* Biſſextili *poſt* Februarium *adde unius diei motum.*

## *MEDII MOTUS LUNÆ, APOGEI ET NODORUM EJUS AD DIES MENSIUM.*

| *Die Mensis.* | MARTII. *Motus Medius Lunæ.* | | | | *Motus Apogei.* | | | *Mot. Nod. Retrog.* | | | APRILIS. *Motus Medius Lunæ.* | | | | *Motus Apogei.* | | | *Mot. Nod. Retrog.* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *S.* | *o.* | *′* | *″* | *o.* | *′* | *″* | *o.* | *′* | *″* | *S.* | *o.* | *′* | *″* | *o.* | *′* | *″* | *o.* | *′* | *″* |
| 1 | 2 | 10 | 35 | 1 | 6 | 41 | 4 | 3 | 10 | 39 | 3 | 29 | 3 | 7 | 10 | 8 | 17 | 4 | 49 | 9 |
| 2 | 2 | 23 | 45 | 36 | 6 | 47 | 45 | 3 | 13 | 49 | 4 | 12 | 13 | 42 | 10 | 14 | 58 | 4 | 52 | 19 |
| 3 | 3 | 6 | 56 | 11 | 6 | 54 | 26 | 3 | 17 | 0 | 4 | 25 | 24 | 17 | 10 | 21 | 39 | 4 | 55 | 30 |
| 4 | 3 | 20 | 6 | 46 | 7 | 1 | 7 | 3 | 20 | 11 | 5 | 8 | 34 | 52 | 10 | 28 | 20 | 4 | 58 | 41 |
| 5 | 4 | 3 | 17 | 21 | 7 | 7 | 48 | 3 | 23 | 21 | 5 | 21 | 45 | 27 | 10 | 35 | 1 | 5 | 1 | 51 |
| 6 | 4 | 16 | 27 | 57 | 7 | 14 | 29 | 3 | 26 | 32 | 6 | 4 | 56 | 2 | 10 | 41 | 42 | 5 | 5 | 2 |
| 7 | 4 | 29 | 38 | 32 | 7 | 21 | 10 | 3 | 29 | 43 | 6 | 18 | 6 | 37 | 10 | 48 | 24 | 5 | 8 | 12 |
| 8 | 5 | 12 | 49 | 7 | 7 | 27 | 51 | 3 | 32 | 53 | 7 | 1 | 17 | 12 | 10 | 55 | 5 | 5 | 11 | 23 |
| 9 | 5 | 25 | 59 | 42 | 7 | 34 | 32 | 3 | 36 | 4 | 7 | 14 | 27 | 47 | 11 | 1 | 46 | 5 | 14 | 34 |
| 10 | 6 | 9 | 10 | 17 | 7 | 41 | 13 | 3 | 39 | 14 | 7 | 27 | 38 | 22 | 11 | 8 | 27 | 5 | 17 | 44 |
| 11 | 6 | 22 | 20 | 52 | 7 | 47 | 54 | 3 | 42 | 25 | 8 | 10 | 48 | 57 | 11 | 15 | 8 | 5 | 20 | 55 |
| 12 | 7 | 5 | 31 | 27 | 7 | 54 | 35 | 3 | 45 | 36 | 8 | 23 | 59 | 32 | 11 | 21 | 49 | 5 | 24 | 6 |
| 13 | 7 | 18 | 42 | 2 | 8 | 1 | 17 | 3 | 48 | 46 | 9 | 7 | 10 | 7 | 11 | 28 | 30 | 5 | 27 | 16 |
| 14 | 8 | 1 | 52 | 37 | 8 | 7 | 58 | 3 | 51 | 57 | 9 | 20 | 20 | 42 | 11 | 35 | 11 | 5 | 30 | 27 |
| 15 | 8 | 15 | 3 | 12 | 8 | 14 | 39 | 3 | 55 | 8 | 10 | 3 | 31 | 17 | 11 | 41 | 52 | 5 | 33 | 38 |
| 16 | 8 | 28 | 13 | 47 | 8 | 21 | 20 | 3 | 58 | 18 | 10 | 16 | 41 | 52 | 11 | 48 | 33 | 5 | 36 | 48 |
| 17 | 9 | 11 | 24 | 22 | 8 | 28 | 1 | 4 | 1 | 29 | 10 | 29 | 52 | 27 | 11 | 55 | 14 | 5 | 39 | 59 |
| 18 | 9 | 24 | 34 | 57 | 8 | 34 | 42 | 4 | 4 | 40 | 11 | 13 | 3 | 2 | 12 | 1 | 55 | 5 | 43 | 9 |
| 19 | 10 | 7 | 45 | 32 | 8 | 41 | 23 | 4 | 7 | 50 | 11 | 26 | 13 | 37 | 12 | 8 | 36 | 5 | 46 | 20 |
| 20 | 10 | 20 | 56 | 7 | 8 | 48 | 4 | 4 | 11 | 1 | 0 | 9 | 24 | 12 | 12 | 15 | 17 | 5 | 49 | 31 |
| 21 | 11 | 4 | 6 | 42 | 8 | 54 | 45 | 4 | 14 | 12 | 0 | 22 | 34 | 47 | 12 | 21 | 59 | 5 | 52 | 41 |
| 22 | 11 | 17 | 17 | 17 | 9 | 1 | 26 | 4 | 17 | 22 | 1 | 5 | 45 | 22 | 12 | 28 | 40 | 5 | 55 | 52 |
| 23 | 0 | 0 | 27 | 52 | 9 | 8 | 7 | 4 | 20 | 33 | 1 | 18 | 55 | 57 | 12 | 35 | 21 | 5 | 59 | 3 |
| 24 | 0 | 13 | 38 | 27 | 9 | 14 | 48 | 4 | 23 | 43 | 2 | 2 | 6 | 32 | 12 | 42 | 2 | 6 | 2 | 13 |
| 25 | 0 | 26 | 49 | 2 | 9 | 21 | 29 | 4 | 26 | 54 | 2 | 15 | 17 | 7 | 12 | 48 | 43 | 6 | 5 | 24 |
| 26 | 1 | 9 | 59 | 37 | 9 | 28 | 10 | 4 | 30 | 5 | 2 | 28 | 27 | 42 | 12 | 55 | 24 | 6 | 8 | 35 |
| 27 | 1 | 23 | 10 | 12 | 9 | 34 | 51 | 4 | 33 | 15 | 3 | 11 | 38 | 17 | 13 | 2 | 5 | 6 | 11 | 45 |
| 28 | 2 | 6 | 20 | 47 | 9 | 41 | 33 | 4 | 36 | 26 | 3 | 24 | 48 | 52 | 13 | 8 | 46 | 6 | 14 | 56 |
| 29 | 2 | 19 | 31 | 22 | 9 | 48 | 14 | 4 | 39 | 37 | 4 | 7 | 59 | 27 | 13 | 15 | 27 | 6 | 18 | 6 |
| 30 | 3 | 2 | 41 | 57 | 9 | 54 | 55 | 4 | 42 | 47 | 4 | 21 | 10 | 2 | 13 | 22 | 8 | 6 | 21 | 17 |
| 31 | 3 | 15 | 52 | 32 | 10 | 1 | 36 | 4 | 45 | 58 | | | | | | | | | | |

## *MEDII MOTUS LUNÆ, APOGEI ET NODORUM EJUS AD DIES MENSIUM.*

### MAII.

| *Die Mensis.* | *Motus Medius Lunæ.* | | | | *Motus Apogei.* | | | *Mot. Nod. Retrog.* | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *S.* | *o.* | *'* | *''* | *o.* | *'* | *''* | *o.* | *'* | *''* |
| 1 | 5 | 4 | 20 | 37 | 13 | 28 | 49 | 6 | 24 | 28 |
| 2 | 5 | 17 | 31 | 12 | 13 | 35 | 30 | 6 | 27 | 38 |
| 3 | 6 | 0 | 41 | 48 | 13 | 42 | 11 | 6 | 30 | 49 |
| 4 | 6 | 13 | 52 | 23 | 13 | 48 | 52 | 6 | 34 | 0 |
| 5 | 6 | 27 | 2 | 58 | 13 | 55 | 33 | 6 | 37 | 10 |
| 6 | 7 | 10 | 13 | 33 | 14 | 2 | 14 | 6 | 40 | 21 |
| 7 | 7 | 23 | 24 | 8 | 14 | 8 | 56 | 6 | 43 | 31 |
| 8 | 8 | 6 | 34 | 43 | 14 | 15 | 37 | 6 | 46 | 42 |
| 9 | 8 | 19 | 45 | 18 | 14 | 22 | 18 | 6 | 49 | 53 |
| 10 | 9 | 2 | 55 | 53 | 14 | 28 | 59 | 6 | 53 | 3 |
| 11 | 9 | 16 | 6 | 28 | 14 | 35 | 40 | 6 | 56 | 14 |
| 12 | 9 | 29 | 17 | 3 | 14 | 42 | 21 | 6 | 59 | 25 |
| 13 | 10 | 12 | 27 | 38 | 14 | 49 | 2 | 7 | 2 | 35 |
| 14 | 10 | 25 | 38 | 13 | 14 | 55 | 43 | 7 | 5 | 46 |
| 15 | 11 | 8 | 48 | 48 | 15 | 2 | 24 | 7 | 8 | 57 |
| 16 | 11 | 21 | 59 | 53 | 15 | 9 | 5 | 7 | 12 | 7 |
| 17 | 0 | 5 | 9 | 58 | 15 | 15 | 46 | 7 | 15 | 18 |
| 18 | 0 | 18 | 20 | 33 | 15 | 22 | 27 | 7 | 18 | 28 |
| 19 | 1 | 1 | 31 | 8 | 15 | 29 | 8 | 7 | 21 | 39 |
| 20 | 1 | 14 | 41 | 43 | 15 | 35 | 49 | 7 | 24 | 50 |
| 21 | 1 | 27 | 52 | 18 | 15 | 42 | 31 | 7 | 28 | 0 |
| 22 | 2 | 11 | 2 | 53 | 15 | 49 | 12 | 7 | 31 | 11 |
| 23 | 2 | 24 | 13 | 28 | 15 | 55 | 53 | 7 | 34 | 22 |
| 24 | 3 | 7 | 24 | 3 | 16 | 2 | 34 | 7 | 37 | 32 |
| 25 | 3 | 20 | 34 | 38 | 16 | 9 | 15 | 7 | 40 | 43 |
| 26 | 4 | 3 | 45 | 13 | 16 | 15 | 56 | 7 | 43 | 54 |
| 27 | 4 | 16 | 55 | 48 | 16 | 22 | 37 | 7 | 47 | 4 |
| 28 | 5 | 0 | 6 | 23 | 16 | 29 | 18 | 7 | 50 | 15 |
| 29 | 5 | 13 | 16 | 58 | 16 | 35 | 59 | 7 | 53 | 25 |
| 30 | 5 | 26 | 27 | 33 | 16 | 42 | 40 | 7 | 56 | 36 |
| 31 | 6 | 9 | 38 | 8 | 16 | 49 | 21 | 7 | 59 | 47 |

### JUNII.

| *Motus Medius Lunæ.* | | | | *Motus Apogei.* | | | *Mot. Nod. Retrog.* | | |
|---|---|---|---|---|---|---|---|---|---|
| *S.* | *o.* | *'* | *''* | *o.* | *'* | *''* | *o.* | *'* | *''* |
| 6 | 22 | 48 | 43 | 16 | 56 | 2 | 8 | 2 | 58 |
| 7 | 5 | 59 | 18 | 17 | 2 | 43 | 8 | 6 | 8 |
| 7 | 19 | 9 | 53 | 17 | 9 | 24 | 8 | 9 | 19 |
| 8 | 2 | 20 | 28 | 17 | 16 | 5 | 8 | 12 | 30 |
| 8 | 15 | 31 | 3 | 17 | 22 | 46 | 8 | 15 | 40 |
| 8 | 28 | 41 | 38 | 17 | 29 | 27 | 8 | 18 | 51 |
| 9 | 11 | 52 | 13 | 17 | 36 | 9 | 8 | 22 | 1 |
| 9 | 25 | 2 | 49 | 17 | 42 | 50 | 8 | 25 | 12 |
| 10 | 8 | 13 | 24 | 17 | 49 | 31 | 8 | 28 | 23 |
| 10 | 21 | 23 | 59 | 17 | 56 | 12 | 8 | 31 | 33 |
| 11 | 4 | 34 | 34 | 18 | 2 | 53 | 8 | 34 | 44 |
| 11 | 17 | 45 | 9 | 18 | 9 | 34 | 8 | 37 | 55 |
| 0 | 0 | 55 | 44 | 18 | 16 | 15 | 8 | 41 | 5 |
| 0 | 14 | 6 | 19 | 18 | 22 | 56 | 8 | 44 | 16 |
| 0 | 27 | 16 | 54 | 18 | 29 | 37 | 8 | 47 | 27 |
| 1 | 10 | 27 | 29 | 18 | 36 | 18 | 8 | 50 | 37 |
| 1 | 23 | 38 | 4 | 18 | 42 | 59 | 8 | 53 | 48 |
| 2 | 6 | 48 | 39 | 18 | 49 | 40 | 8 | 56 | 58 |
| 2 | 19 | 59 | 14 | 18 | 56 | 21 | 9 | 0 | 9 |
| 3 | 3 | 9 | 49 | 19 | 3 | 2 | 9 | 3 | 20 |
| 3 | 16 | 20 | 24 | 19 | 9 | 44 | 9 | 6 | 30 |
| 3 | 29 | 30 | 59 | 19 | 16 | 25 | 9 | 9 | 41 |
| 4 | 12 | 41 | 34 | 19 | 23 | 6 | 9 | 12 | 51 |
| 4 | 25 | 52 | 9 | 19 | 29 | 47 | 9 | 16 | 2 |
| 5 | 9 | 2 | 44 | 19 | 36 | 28 | 9 | 19 | 13 |
| 5 | 22 | 13 | 19 | 19 | 43 | 9 | 9 | 22 | 23 |
| 6 | 5 | 23 | 54 | 19 | 49 | 50 | 9 | 25 | 34 |
| 6 | 18 | 34 | 29 | 19 | 56 | 31 | 9 | 28 | 45 |
| 7 | 1 | 45 | 4 | 20 | 3 | 12 | 9 | 31 | 55 |
| 7 | 14 | 55 | 39 | 20 | 9 | 53 | 9 | 35 | 6 |

## *MEDII MOTUS LUNÆ, APOGEI ET NODORUM EJUS AD DIES MENSIUM.*

| | JULII. | | | | | | | | | AUGUSTI. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Die Mensis.* | *Motus Medius Lunæ.* | | | | *Motus Apogei.* | | | *Mot. Nod. Retrog.* | | *Motus Medius Lunæ.* | | | | *Motus Apogei.* | | | *Mot. Nod. Retrog.* | |
| | S. | o. | ′ | ″ | o. | ′ | ″ | o. | ′ | ″ | S. | o. | ′ | ″ | o. | ′ | ″ | o. | ′ | ″ |
| 1 | 7 | 28 | 6 | 14 | 20 | 16 | 34 | 9 | 38 | 17 | 9 | 16 | 34 | 20 | 23 | 43 | 47 | 11 | 16 | 47 |
| 2 | 8 | 11 | 16 | 49 | 20 | 23 | 15 | 9 | 41 | 27 | 9 | 29 | 44 | 55 | 23 | 50 | 28 | 11 | 19 | 57 |
| 3 | 8 | 24 | 27 | 24 | 20 | 29 | 56 | 9 | 44 | 38 | 10 | 12 | 55 | 30 | 23 | 57 | 9 | 11 | 23 | 8 |
| 4 | 9 | 7 | 37 | 59 | 20 | 36 | 37 | 9 | 47 | 49 | 10 | 26 | 6 | 5 | 24 | 3 | 50 | 11 | 26 | 18 |
| 5 | 9 | 20 | 48 | 34 | 20 | 43 | 18 | 9 | 50 | 59 | 11 | 9 | 16 | 40 | 24 | 10 | 31 | 11 | 29 | 29 |
| 6 | 10 | 3 | 59 | 9 | 20 | 49 | 59 | 9 | 54 | 10 | 11 | 22 | 27 | 15 | 24 | 17 | 12 | 11 | 32 | 40 |
| 7 | 10 | 17 | 9 | 44 | 20 | 56 | 41 | 9 | 57 | 20 | 0 | 5 | 37 | 50 | 24 | 23 | 53 | 11 | 35 | 50 |
| 8 | 11 | 0 | 20 | 19 | 21 | 3 | 22 | 10 | 0 | 31 | 0 | 18 | 48 | 25 | 24 | 30 | 35 | 11 | 39 | 1 |
| 9 | 11 | 13 | 30 | 54 | 21 | 10 | 3 | 10 | 3 | 42 | 1 | 1 | 59 | 0 | 24 | 37 | 16 | 11 | 42 | 12 |
| 10 | 11 | 26 | 41 | 30 | 21 | 16 | 44 | 10 | 6 | 52 | 1 | 15 | 9 | 35 | 24 | 43 | 57 | 11 | 45 | 22 |
| 11 | 0 | 9 | 52 | 5 | 21 | 23 | 25 | 10 | 10 | 3 | 1 | 28 | 20 | 10 | 24 | 50 | 38 | 11 | 48 | 33 |
| 12 | 0 | 23 | 2 | 40 | 21 | 30 | 6 | 10 | 13 | 14 | 2 | 11 | 30 | 45 | 24 | 57 | 19 | 11 | 51 | 44 |
| 13 | 1 | 6 | 13 | 15 | 21 | 36 | 47 | 10 | 16 | 24 | 2 | 24 | 41 | 20 | 25 | 4 | 0 | 11 | 54 | 54 |
| 14 | 1 | 19 | 23 | 50 | 21 | 43 | 28 | 10 | 19 | 35 | 3 | 7 | 51 | 55 | 25 | 10 | 41 | 11 | 58 | 5 |
| 15 | 2 | 2 | 34 | 25 | 21 | 50 | 9 | 10 | 22 | 46 | 3 | 21 | 2 | 30 | 25 | 17 | 22 | 12 | 1 | 16 |
| 16 | 2 | 15 | 45 | 0 | 21 | 56 | 50 | 10 | 25 | 56 | 4 | 4 | 13 | 5 | 25 | 24 | 3 | 12 | 4 | 26 |
| 17 | 2 | 28 | 55 | 35 | 22 | 3 | 31 | 10 | 29 | 7 | 4 | 17 | 23 | 40 | 25 | 30 | 44 | 12 | 7 | 37 |
| 18 | 3 | 12 | 6 | 10 | 22 | 10 | 12 | 10 | 32 | 17 | 5 | 0 | 34 | 15 | 25 | 37 | 25 | 12 | 10 | 47 |
| 19 | 3 | 25 | 16 | 45 | 22 | 16 | 53 | 10 | 35 | 28 | 5 | 13 | 44 | 50 | 25 | 44 | 6 | 12 | 13 | 58 |
| 20 | 4 | 8 | 27 | 20 | 22 | 23 | 34 | 10 | 38 | 39 | 5 | 26 | 55 | 25 | 25 | 50 | 47 | 12 | 17 | 9 |
| 21 | 4 | 21 | 37 | 55 | 22 | 30 | 16 | 10 | 41 | 49 | 6 | 10 | 6 | 0 | 25 | 57 | 29 | 12 | 20 | 19 |
| 22 | 5 | 4 | 48 | 30 | 22 | 36 | 57 | 10 | 45 | 0 | 6 | 23 | 16 | 35 | 26 | 4 | 10 | 12 | 23 | 30 |
| 23 | 5 | 17 | 59 | 5 | 22 | 43 | 38 | 10 | 48 | 11 | 7 | 6 | 27 | 10 | 26 | 10 | 51 | 12 | 26 | 40 |
| 24 | 6 | 1 | 9 | 40 | 22 | 50 | 19 | 10 | 51 | 21 | 7 | 19 | 37 | 45 | 26 | 17 | 32 | 12 | 29 | 51 |
| 25 | 6 | 14 | 20 | 15 | 22 | 57 | 0 | 10 | 54 | 32 | 8 | 2 | 48 | 20 | 26 | 24 | 13 | 12 | 33 | 2 |
| 26 | 6 | 27 | 30 | 50 | 23 | 3 | 41 | 10 | 57 | 43 | 8 | 15 | 58 | 55 | 26 | 30 | 54 | 12 | 36 | 13 |
| 27 | 7 | 10 | 41 | 25 | 23 | 10 | 22 | 11 | 0 | 53 | 8 | 29 | 9 | 30 | 26 | 37 | 35 | 12 | 39 | 23 |
| 28 | 7 | 23 | 52 | 0 | 23 | 17 | 3 | 11 | 4 | 4 | 9 | 12 | 20 | 5 | 26 | 44 | 16 | 12 | 42 | 34 |
| 29 | 8 | 7 | 2 | 35 | 23 | 23 | 44 | 11 | 7 | 14 | 9 | 25 | 30 | 40 | 26 | 50 | 57 | 12 | 45 | 44 |
| 30 | 8 | 20 | 13 | 10 | 23 | 30 | 25 | 11 | 10 | 25 | 10 | 8 | 41 | 15 | 26 | 57 | 38 | 12 | 48 | 55 |
| 31 | 9 | 3 | 23 | 45 | 23 | 37 | 6 | 11 | 13 | 36 | 10 | 21 | 51 | 50 | 27 | 4 | 19 | 12 | 52 | 6 |

## *MEDII MOTUS LUNÆ, APOGEI ET NODORUM EJUS AD DIES MENSIUM.*

| | SEPTEMBRIS. | | | OCTOBRIS. | | |
|---|---|---|---|---|---|---|
| *Die Mensis.* | *Motus Medius Lunæ.* | *Motus Apogei.* | *Mot. Nod. Retrog.* | *Motus Medius Lunæ.* | *Motus Apogei.* | *Mot. Nod. Retrog.* |
| | *S. o. ′ ″* | *S. o. ′ ″* | *o. ′ ″* | *S. o. ′ ″* | *S. o. ′ ″* | *o. ′ ″* |
| 1 | 11 5 2 26 | 0 27 11 0 | 12 55 17 | 0 10 19 56 | 1 0 31 32 | 14 30 36 |
| 2 | 11 18 13 1 | 0 27 17 41 | 12 58 27 | 0 23 30 31 | 1 0 38 13 | 14 33 46 |
| 3 | 0 1 23 36 | 0 27 24 22 | 13 1 38 | 1 6 41 6 | 1 0 44 54 | 14 36 57 |
| 4 | 0 14 34 11 | 0 27 31 3 | 13 4 49 | 1 19 51 41 | 1 0 51 35 | 14 40 8 |
| 5 | 0 27 44 46 | 0 27 37 44 | 13 7 59 | 2 3 2 16 | 1 0 58 16 | 14 43 18 |
| 6 | 1 10 55 21 | 0 27 44 25 | 13 11 10 | 2 16 12 51 | 1 1 4 57 | 14 46 29 |
| 7 | 1 24 5 56 | 0 27 51 6 | 13 14 20 | 2 29 23 26 | 1 1 11 39 | 14 49 39 |
| 8 | 2 7 16 31 | 0 27 57 48 | 13 17 31 | 3 12 34 1 | 1 1 18 20 | 14 52 50 |
| 9 | 2 20 27 6 | 0 28 4 29 | 13 20 42 | 3 25 44 36 | 1 1 25 1 | 14 56 1 |
| 10 | 3 3 37 41 | 0 28 11 10 | 13 23 52 | 4 8 55 11 | 1 1 31 42 | 14 59 11 |
| 11 | 3 16 48 16 | 0 28 17 51 | 13 27 3 | 4 22 5 46 | 1 1 38 23 | 15 2 22 |
| 12 | 3 29 58 51 | 0 28 24 32 | 13 30 14 | 5 5 16 21 | 1 1 45 4 | 15 5 33 |
| 13 | 4 13 9 26 | 0 28 31 13 | 13 33 24 | 5 18 26 56 | 1 1 51 45 | 15 8 43 |
| 14 | 4 26 20 1 | 0 28 37 54 | 13 36 35 | 6 1 37 31 | 1 1 58 27 | 15 11 54 |
| 15 | 5 9 30 36 | 0 28 44 35 | 13 39 46 | 6 14 48 6 | 1 2 5 8 | 15 15 5 |
| 16 | 5 22 41 11 | 0 28 51 16 | 13 42 56 | 6 27 58 41 | 1 2 11 49 | 15 18 15 |
| 17 | 6 5 51 46 | 0 28 57 57 | 13 46 7 | 7 11 9 16 | 1 2 18 30 | 15 21 26 |
| 18 | 6 19 2 21 | 0 29 4 38 | 13 49 17 | 7 24 19 51 | 1 2 25 11 | 15 24 36 |
| 19 | 7 2 12 56 | 0 29 11 19 | 13 52 28 | 8 7 30 26 | 1 2 31 52 | 15 27 47 |
| 20 | 7 15 23 31 | 0 29 18 0 | 13 55 39 | 8 20 41 1 | 1 2 38 33 | 15 30 58 |
| 21 | 7 28 34 6 | 0 29 24 42 | 13 58 49 | 9 3 51 36 | 1 2 45 14 | 15 34 8 |
| 22 | 8 11 44 41 | 0 29 31 23 | 14 2 0 | 9 17 2 11 | 1 2 51 55 | 15 37 19 |
| 23 | 8 24 55 16 | 0 29 38 4 | 14 5 11 | 10 0 12 46 | 1 2 58 36 | 15 40 29 |
| 24 | 9 8 5 51 | 0 29 44 45 | 14 8 21 | 10 13 23 21 | 1 3 5 17 | 15 43 40 |
| 25 | 9 21 16 26 | 0 29 51 26 | 14 11 32 | 10 26 33 56 | 1 3 11 58 | 15 46 51 |
| 26 | 10 4 27 1 | 0 29 58 7 | 14 14 42 | 11 9 44 31 | 1 3 18 39 | 15 50 1 |
| 27 | 10 17 37 36 | 1 0 4 48 | 14 17 53 | 11 22 55 6 | 1 3 25 20 | 15 53 12 |
| 28 | 11 0 48 11 | 1 0 11 29 | 14 21 4 | 0 6 5 41 | 1 3 32 2 | 15 56 22 |
| 29 | 11 13 58 46 | 1 0 18 10 | 14 24 14 | 0 19 16 16 | 1 3 38 43 | 15 59 33 |
| 30 | 11 27 9 21 | 1 0 24 51 | 14 27 25 | 1 2 26 51 | 1 3 45 24 | 16 2 44 |
| 31 | | | | 1 15 37 26 | 1 3 52 5 | 16 5 55 |

## *MEDII MOTVS LVNÆ, APOGEI ET NODORVM EJVS AD DIES MENSIVM.*

| | NOVEMBRIS. | | | DECEMBRIS. | | |
|---|---|---|---|---|---|---|
| *Die Mensis.* | *Motus Medius Lunæ.* | *Motus Apogei.* | *Mot. Nod. Retrog.* | *Motus Medius Lunæ.* | *Motus Apogei.* | *Mot. Nod. Retrog.* |
| | *S. o. ′ ″* | *S. o. ′ ″* | *o. ′ ″* | *S. o. ′ ″* | *S. o. ′ ″* | *o. ′ ″* |
| 1 | 1 28 48 1 | 1 3 58 46 | 16 9 6 | 3 4 5 32 | 1 7 19 18 | 17 44 25 |
| 2 | 2 11 58 36 | 1 4 5 27 | 16 12 16 | 3 17 16 7 | 1 7 25 59 | 17 47 35 |
| 3 | 2 25 9 12 | 1 4 12 8 | 16 15 27 | 4 0 26 42 | 1 7 32 40 | 17 50 46 |
| 4 | 3 8 19 47 | 1 4 18 49 | 16 18 38 | 4 13 37 17 | 1 7 39 21 | 17 53 57 |
| 5 | 3 21 30 22 | 1 4 25 30 | 16 21 48 | 4 26 47 52 | 1 7 46 2 | 17 57 7 |
| 6 | 4 4 40 57 | 1 4 32 11 | 16 24 59 | 5 9 58 27 | 1 7 52 43 | 18 0 18 |
| 7 | 4 17 51 32 | 1 4 38 53 | 16 28 9 | 5 23 9 2 | 1 7 59 25 | 18 3 28 |
| 8 | 5 1 2 7 | 1 4 45 34 | 16 31 20 | 6 6 19 37 | 1 8 6 6 | 18 6 39 |
| 9 | 5 14 12 42 | 1 4 52 15 | 16 34 31 | 6 19 30 12 | 1 8 12 47 | 18 9 50 |
| 10 | 5 27 23 17 | 1 4 58 56 | 16 37 41 | 7 2 40 47 | 1 8 19 28 | 18 13 0 |
| 11 | 6 10 33 52 | 1 5 5 37 | 16 40 52 | 7 15 51 22 | 1 8 26 9 | 18 16 11 |
| 12 | 6 23 44 27 | 1 5 12 18 | 16 44 3 | 7 29 1 57 | 1 8 32 50 | 18 19 22 |
| 13 | 7 6 55 2 | 1 5 18 59 | 16 47 13 | 8 12 12 32 | 1 8 39 31 | 18 22 32 |
| 14 | 7 20 5 37 | 1 5 25 40 | 16 50 24 | 8 25 23 7 | 1 8 46 12 | 18 25 43 |
| 15 | 8 3 16 12 | 1 5 32 21 | 16 53 35 | 9 8 33 42 | 1 8 52 53 | 18 28 54 |
| 16 | 8 16 26 47 | 1 5 39 2 | 16 56 45 | 9 21 44 17 | 1 8 59 34 | 18 32 4 |
| 17 | 8 29 37 22 | 1 5 45 43 | 16 59 56 | 10 4 54 52 | 1 9 6 15 | 18 35 15 |
| 18 | 9 12 47 57 | 1 5 52 24 | 17 3 6 | 10 18 5 28 | 1 9 12 56 | 18 38 25 |
| 19 | 9 25 58 32 | 1 5 59 5 | 17 6 17 | 11 1 16 3 | 1 9 19 37 | 18 41 36 |
| 20 | 10 9 9 7 | 1 6 5 46 | 17 9 28 | 11 14 26 38 | 1 9 26 18 | 18 44 47 |
| 21 | 10 22 19 42 | 1 6 12 28 | 17 12 38 | 11 27 37 13 | 1 9 33 0 | 18 47 57 |
| 22 | 11 5 30 17 | 1 6 19 9 | 17 15 49 | 0 10 47 48 | 1 9 39 41 | 18 51 8 |
| 23 | 11 18 40 52 | 1 6 25 50 | 17 19 0 | 0 23 58 23 | 1 9 46 22 | 18 54 19 |
| 24 | 0 1 51 27 | 1 6 32 31 | 17 22 10 | 1 7 8 58 | 1 9 53 3 | 18 57 29 |
| 25 | 0 15 2 2 | 1 6 39 12 | 17 25 21 | 1 20 19 33 | 1 9 59 44 | 19 0 40 |
| 26 | 0 28 12 37 | 1 6 45 53 | 17 28 32 | 2 3 30 8 | 1 10 6 25 | 19 3 51 |
| 27 | 1 11 23 12 | 1 6 52 34 | 17 31 42 | 2 16 40 43 | 1 10 13 6 | 19 7 1 |
| 28 | 1 24 33 47 | 1 6 59 15 | 17 34 53 | 2 29 51 18 | 1 10 19 47 | 19 10 12 |
| 29 | 2 7 44 22 | 1 7 5 56 | 17 38 3 | 3 13 1 53 | 1 10 26 28 | 19 13 22 |
| 30 | 2 20 54 57 | 1 7 12 37 | 17 41 14 | 3 26 12 28 | 1 10 33 9 | 19 16 33 |
| 31 | | | | 4 9 23 3 | 1 10 39 50 | 19 19 43 |

# *MEDII MOTVS LVNÆ, APOGEI ET NODORVM AD HORAS ET MINVTA HORARIA.*

| | *Mot. Med. Lunæ.* | | | *Apogei Lunæ.* | | | *Mot. Nod. Lunæ.* | | |
|---|---|---|---|---|---|---|---|---|---|
| *N* | // | /// | //// | // | /// | //// | // | /// | //// |
| / | / | // | /// | / | // | /// | / | // | /// |
| H. | o. | / | // | o. | / | // | o. | / | // |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 32 | 56 | 0 | 0 | 17 | 0 | 0 | 8 |
| 2 | 1 | 5 | 53 | 0 | 0 | 33 | 0 | 0 | 16 |
| 3 | 1 | 38 | 49 | 0 | 0 | 50 | 0 | 0 | 24 |
| 4 | 2 | 11 | 46 | 0 | 1 | 7 | 0 | 0 | 32 |
| 5 | 2 | 44 | 42 | 0 | 1 | 24 | 0 | 0 | 40 |
| 6 | 3 | 17 | 39 | 0 | 1 | 40 | 0 | 0 | 48 |
| 7 | 3 | 50 | 35 | 0 | 1 | 57 | 0 | 0 | 56 |
| 8 | 4 | 23 | 32 | 0 | 2 | 14 | 0 | 1 | 4 |
| 9 | 4 | 56 | 28 | 0 | 2 | 30 | 0 | 1 | 12 |
| 10 | 5 | 29 | 25 | 0 | 2 | 47 | 0 | 1 | 19 |
| 11 | 6 | 2 | 21 | 0 | 3 | 4 | 0 | 1 | 27 |
| 12 | 6 | 35 | 18 | 0 | 3 | 21 | 0 | 1 | 35 |
| 13 | 7 | 8 | 14 | 0 | 3 | 37 | 0 | 1 | 43 |
| 14 | 7 | 41 | 10 | 0 | 3 | 54 | 0 | 1 | 51 |
| 15 | 8 | 14 | 7 | 0 | 4 | 11 | 0 | 1 | 59 |
| 16 | 8 | 47 | 3 | 0 | 4 | 27 | 0 | 2 | 7 |
| 17 | 9 | 20 | 0 | 0 | 4 | 44 | 0 | 2 | 15 |
| 18 | 9 | 52 | 56 | 0 | 5 | 1 | 0 | 2 | 23 |
| 19 | 10 | 25 | 53 | 0 | 5 | 18 | 0 | 2 | 31 |
| 20 | 10 | 58 | 49 | 0 | 5 | 34 | 0 | 2 | 39 |
| 21 | 11 | 31 | 46 | 0 | 5 | 51 | 0 | 2 | 47 |
| 22 | 12 | 4 | 42 | 0 | 6 | 8 | 0 | 2 | 55 |
| 23 | 12 | 37 | 39 | 0 | 6 | 24 | 0 | 3 | 3 |
| 24 | 13 | 10 | 35 | 0 | 6 | 41 | 0 | 3 | 11 |
| 25 | 13 | 43 | 32 | 0 | 6 | 58 | 0 | 3 | 19 |
| 26 | 14 | 16 | 28 | 0 | 7 | 15 | 0 | 3 | 27 |
| 27 | 14 | 49 | 24 | 0 | 7 | 31 | 0 | 3 | 34 |
| 28 | 15 | 22 | 21 | 0 | 7 | 48 | 0 | 3 | 42 |
| 29 | 15 | 55 | 17 | 0 | 8 | 5 | 0 | 3 | 50 |
| 30 | 16 | 28 | 14 | 0 | 8 | 21 | 0 | 3 | 58 |

| | *Mot. Med. Lunæ.* | | | *Apogei Lunæ.* | | | *Mot. Nod. Lunæ.* | | |
|---|---|---|---|---|---|---|---|---|---|
| // | // | /// | //// | // | /// | //// | // | /// | //// |
| / | / | // | /// | / | // | /// | / | // | /// |
| H. | o. | / | // | o. | / | // | o. | / | // |
| 30 | 16 | 28 | 14 | 0 | 8 | 21 | 0 | 3 | 58 |
| 31 | 17 | 1 | 10 | 0 | 8 | 38 | 0 | 4 | 6 |
| 32 | 17 | 34 | 7 | 0 | 8 | 54 | 0 | 4 | 14 |
| 33 | 18 | 7 | 3 | 0 | 9 | 11 | 0 | 4 | 22 |
| 34 | 18 | 39 | 59 | 0 | 9 | 28 | 0 | 4 | 30 |
| 35 | 19 | 12 | 55 | 0 | 9 | 45 | 0 | 4 | 38 |
| 36 | 19 | 45 | 52 | 0 | 10 | 2 | 0 | 4 | 46 |
| 37 | 20 | 18 | 48 | 0 | 10 | 19 | 0 | 4 | 54 |
| 38 | 20 | 51 | 45 | 0 | 10 | 36 | 0 | 5 | 2 |
| 39 | 21 | 24 | 41 | 0 | 10 | 52 | 0 | 5 | 10 |
| 40 | 21 | 57 | 38 | 0 | 11 | 8 | 0 | 5 | 18 |
| 41 | 22 | 30 | 34 | 0 | 11 | 25 | 0 | 5 | 26 |
| 42 | 23 | 3 | 31 | 0 | 11 | 42 | 0 | 5 | 34 |
| 43 | 23 | 36 | 27 | 0 | 11 | 59 | 0 | 5 | 42 |
| 44 | 24 | 9 | 24 | 0 | 12 | 16 | 0 | 5 | 50 |
| 45 | 24 | 42 | 20 | 0 | 12 | 32 | 0 | 5 | 57 |
| 46 | 25 | 15 | 17 | 0 | 12 | 48 | 0 | 6 | 5 |
| 47 | 25 | 48 | 13 | 0 | 13 | 5 | 0 | 6 | 13 |
| 48 | 26 | 21 | 10 | 0 | 13 | 22 | 0 | 6 | 21 |
| 49 | 26 | 54 | 6 | 0 | 13 | 39 | 0 | 6 | 29 |
| 50 | 27 | 27 | 3 | 0 | 13 | 56 | 0 | 6 | 37 |
| 51 | 27 | 59 | 59 | 0 | 14 | 13 | 0 | 6 | 45 |
| 52 | 28 | 32 | 56 | 0 | 14 | 30 | 0 | 6 | 53 |
| 53 | 29 | 5 | 52 | 0 | 14 | 46 | 0 | 7 | 1 |
| 54 | 29 | 38 | 49 | 0 | 15 | 2 | 0 | 7 | 9 |
| 55 | 30 | 11 | 45 | 0 | 15 | 19 | 0 | 7 | 17 |
| 56 | 30 | 44 | 42 | 0 | 15 | 36 | 0 | 7 | 25 |
| 57 | 31 | 17 | 38 | 0 | 15 | 53 | 0 | 7 | 33 |
| 58 | 31 | 50 | 34 | 0 | 16 | 10 | 0 | 7 | 41 |
| 59 | 32 | 23 | 31 | 0 | 16 | 26 | 0 | 7 | 49 |
| 60 | 32 | 56 | 27 | 0 | 16 | 43 | 0 | 7 | 56 |

# TABVLA MEDII MOTVS LVNÆ, APOGEI ET NODORVM AB ÆQVINOCTIO, AC LVNÆ A SOLE.

## IN CENTVRIIS ANNORVM IVLIANORVM.

| Annis Julianis. | Motus Medius Lunæ. | | | | Motus Apogei Lunæ. | | | | Motus Nodorum Lunæ Retrog. | | | | Motus Lunæ a Sole. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S. | o. | ′ | ″ | S. | o. | ′ | ″ | S. | o. | ′ | ″ | S. | o. | ′ | ″ |
| 100 | 10 | 7 | 50 | 25 | 3 | 19 | 11 | 15 | 4 | 14 | 11 | 15 | 10 | 7 | 4 | 53 |
| 200 | 8 | 15 | 40 | 50 | 7 | 8 | 22 | 30 | 8 | 28 | 22 | 30 | 8 | 14 | 9 | 46 |
| 300 | 6 | 23 | 31 | 15 | 10 | 27 | 33 | 45 | 1 | 12 | 33 | 45 | 6 | 21 | 14 | 39 |
| 400 | 5 | 1 | 21 | 40 | 2 | 16 | 45 | 0 | 5 | 26 | 45 | 0 | 4 | 28 | 19 | 32 |
| 500 | 3 | 9 | 12 | 5 | 6 | 5 | 56 | 15 | 10 | 10 | 56 | 15 | 3 | 5 | 24 | 25 |
| 600 | 1 | 17 | 2 | 30 | 9 | 25 | 7 | 30 | 2 | 25 | 7 | 30 | 1 | 12 | 29 | 18 |
| 700 | 11 | 24 | 52 | 55 | 1 | 14 | 18 | 45 | 7 | 9 | 18 | 45 | 11 | 19 | 34 | 11 |
| 800 | 10 | 2 | 43 | 20 | 5 | 3 | 30 | 0 | 11 | 23 | 30 | 0 | 9 | 26 | 39 | 4 |
| 900 | 8 | 10 | 33 | 45 | 8 | 22 | 41 | 15 | 4 | 7 | 41 | 15 | 8 | 3 | 43 | 57 |
| 1000 | 6 | 18 | 24 | 10 | 0 | 11 | 52 | 30 | 8 | 21 | 52 | 30 | 6 | 10 | 48 | 50 |
| 1100 | 4 | 26 | 14 | 35 | 4 | 1 | 3 | 45 | 1 | 6 | 3 | 45 | 4 | 17 | 53 | 43 |
| 1200 | 3 | 4 | 5 | 0 | 7 | 20 | 15 | 0 | 5 | 20 | 15 | 0 | 2 | 24 | 58 | 36 |
| 1300 | 1 | 11 | 55 | 25 | 11 | 9 | 26 | 15 | 10 | 4 | 26 | 15 | 1 | 2 | 3 | 29 |
| 1400 | 11 | 19 | 45 | 50 | 2 | 28 | 37 | 30 | 2 | 18 | 37 | 30 | 11 | 9 | 8 | 22 |
| 1500 | 9 | 27 | 36 | 15 | 6 | 17 | 48 | 45 | 7 | 2 | 48 | 45 | 9 | 16 | 13 | 15 |
| 1600 | 8 | 5 | 26 | 40 | 10 | 7 | 0 | 0 | 11 | 17 | 0 | 0 | 7 | 23 | 18 | 8 |
| 1700 | 6 | 13 | 17 | 5 | 1 | 26 | 11 | 15 | 4 | 1 | 11 | 15 | 6 | 0 | 23 | 1 |
| 1800 | 4 | 21 | 7 | 30 | 5 | 15 | 22 | 30 | 8 | 15 | 22 | 30 | 4 | 7 | 27 | 54 |
| 1900 | 2 | 28 | 57 | 55 | 9 | 4 | 33 | 45 | 0 | 29 | 33 | 45 | 2 | 14 | 32 | 47 |
| 2000 | 1 | 6 | 48 | 20 | 0 | 23 | 45 | 0 | 5 | 13 | 45 | 0 | 0 | 21 | 37 | 40 |
| 2100 | 11 | 14 | 38 | 45 | 4 | 12 | 56 | 15 | 9 | 27 | 56 | 15 | 10 | 28 | 42 | 33 |
| 2200 | 9 | 22 | 29 | 10 | 8 | 2 | 7 | 30 | 2 | 12 | 7 | 30 | 9 | 5 | 47 | 26 |
| 2300 | 8 | 0 | 19 | 35 | 11 | 21 | 18 | 45 | 6 | 26 | 18 | 45 | 7 | 12 | 52 | 19 |
| 2400 | 6 | 8 | 10 | 0 | 3 | 10 | 30 | 0 | 11 | 10 | 30 | 0 | 5 | 19 | 57 | 12 |
| 2500 | 4 | 16 | 0 | 25 | 6 | 29 | 41 | 15 | 3 | 24 | 41 | 15 | 3 | 27 | 2 | 5 |
| 2600 | 2 | 23 | 50 | 50 | 10 | 18 | 52 | 30 | 8 | 8 | 52 | 30 | 2 | 4 | 6 | 58 |
| 2700 | 1 | 1 | 41 | 15 | 2 | 8 | 3 | 45 | 0 | 23 | 3 | 45 | 0 | 11 | 11 | 51 |
| 2800 | 11 | 9 | 31 | 40 | 5 | 27 | 15 | 0 | 5 | 7 | 15 | 0 | 10 | 18 | 16 | 44 |
| 2900 | 9 | 17 | 22 | 5 | 9 | 16 | 26 | 15 | 9 | 21 | 26 | 15 | 8 | 25 | 21 | 37 |
| 3000 | 7 | 25 | 12 | 30 | 1 | 5 | 37 | 30 | 2 | 5 | 37 | 30 | 7 | 2 | 26 | 30 |
| 3100 | 6 | 3 | 2 | 55 | 4 | 24 | 48 | 45 | 6 | 19 | 48 | 45 | 5 | 9 | 31 | 23 |
| 3200 | 4 | 10 | 53 | 20 | 8 | 14 | 0 | 0 | 11 | 4 | 0 | 0 | 3 | 16 | 36 | 16 |

# TABULA ÆQUATIONUM ANNUARUM LUNÆ, APOGEI ET NODORUM.

*Anomalia Media Solis.*

| Anom. mal. med. Solis | Sig. 0. Æq. D. Adde. | | Apog. Subtr. | | Nod. Adde. | | Sig. I. Luna Adde. | | Apog. Subtr. | | Nod Adde. | | Sig. II. Luna Adde. | | Apog. Subtr. | | Nod. Adde. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gr. | ′ | ″ | ′ | ″ | ′ | ″ | ′ | ″ | ′ | ″ | ′ | ″ | ′ | ″ | ′ | ″ | ′ | ″ | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 47 | 9 | 49 | 4 | 40 | 10 | 7 | 17 | 8 | 8 | 9 | 30 |
| 1 | 0 | 12 | 0 | 20 | 0 | 9 | 5 | 58 | 10 | 7 | 4 | 48 | 10 | 14 | 17 | 19 | 8 | 14 | 29 |
| 2 | 0 | 24 | 0 | 41 | 0 | 19 | 6 | 9 | 10 | 24 | 4 | 57 | 10 | 20 | 17 | 29 | 8 | 19 | 28 |
| 3 | 0 | 36 | 1 | 1 | 0 | 29 | 6 | 19 | 10 | 42 | 5 | 5 | 10 | 26 | 17 | 39 | 8 | 24 | 27 |
| 4 | 0 | 48 | 1 | 22 | 0 | 39 | 6 | 29 | 10 | 59 | 5 | 13 | 10 | 31 | 17 | 48 | 8 | 28 | 26 |
| 5 | 1 | 0 | 1 | 42 | 0 | 48 | 6 | 39 | 11 | 16 | 5 | 21 | 10 | 37 | 17 | 58 | 8 | 32 | 25 |
| 6 | 1 | 12 | 2 | 3 | 0 | 58 | 6 | 49 | 11 | 33 | 5 | 29 | 10 | 42 | 18 | 7 | 8 | 36 | 24 |
| 7 | 1 | 24 | 2 | 23 | 1 | 8 | 6 | 59 | 11 | 49 | 5 | 37 | 10 | 47 | 18 | 16 | 8 | 40 | 23 |
| 8 | 1 | 36 | 2 | 43 | 1 | 18 | 7 | 9 | 12 | 6 | 5 | 45 | 10 | 52 | 18 | 24 | 8 | 44 | 22 |
| 9 | 1 | 48 | 3 | 4 | 1 | 27 | 7 | 19 | 12 | 22 | 5 | 53 | 10 | 56 | 18 | 32 | 8 | 48 | 21 |
| 10 | 1 | 59 | 3 | 24 | 1 | 37 | 7 | 28 | 12 | 39 | 6 | 0 | 11 | 1 | 18 | 39 | 8 | 52 | 20 |
| 11 | 2 | 11 | 3 | 44 | 1 | 46 | 7 | 37 | 12 | 55 | 6 | 8 | 11 | 5 | 18 | 46 | 8 | 55 | 19 |
| 12 | 2 | 23 | 4 | 4 | 1 | 56 | 7 | 46 | 13 | 10 | 6 | 15 | 11 | 9 | 18 | 53 | 8 | 58 | 18 |
| 13 | 2 | 35 | 4 | 24 | 2 | 5 | 7 | 55 | 13 | 26 | 6 | 22 | 11 | 14 | 19 | 0 | 9 | 2 | 17 |
| 14 | 2 | 46 | 4 | 44 | 2 | 15 | 8 | 4 | 13 | 41 | 6 | 30 | 11 | 19 | 19 | 6 | 9 | 5 | 16 |
| 15 | 2 | 58 | 5 | 4 | 2 | 24 | 8 | 13 | 13 | 56 | 6 | 37 | 11 | 22 | 19 | 12 | 9 | 7 | 15 |
| 16 | 3 | 10 | 5 | 24 | 2 | 34 | 8 | 22 | 14 | 10 | 6 | 44 | 11 | 25 | 19 | 18 | 9 | 10 | 14 |
| 17 | 3 | 22 | 5 | 44 | 2 | 43 | 8 | 31 | 14 | 25 | 6 | 50 | 11 | 28 | 19 | 23 | 9 | 12 | 13 |
| 18 | 3 | 34 | 6 | 3 | 2 | 53 | 8 | 39 | 14 | 39 | 6 | 57 | 11 | 30 | 19 | 28 | 9 | 15 | 12 |
| 19 | 3 | 46 | 6 | 23 | 3 | 2 | 8 | 47 | 14 | 53 | 7 | 4 | 11 | 32 | 19 | 33 | 9 | 17 | 11 |
| 20 | 3 | 57 | 6 | 43 | 3 | 11 | 8 | 55 | 15 | 7 | 7 | 11 | 11 | 35 | 19 | 37 | 9 | 19 | 10 |
| 21 | 4 | 9 | 7 | 2 | 3 | 20 | 9 | 3 | 15 | 21 | 7 | 17 | 11 | 38 | 19 | 41 | 9 | 21 | 9 |
| 22 | 4 | 20 | 7 | 21 | 3 | 29 | 9 | 11 | 15 | 33 | 7 | 23 | 11 | 40 | 19 | 44 | 9 | 22 | 8 |
| 23 | 4 | 31 | 7 | 40 | 3 | 38 | 9 | 19 | 15 | 46 | 7 | 29 | 11 | 42 | 19 | 48 | 9 | 24 | 7 |
| 24 | 4 | 42 | 7 | 59 | 3 | 47 | 9 | 27 | 15 | 58 | 7 | 35 | 11 | 43 | 19 | 51 | 9 | 25 | 6 |
| 25 | 4 | 53 | 8 | 18 | 3 | 56 | 9 | 34 | 16 | 11 | 7 | 41 | 11 | 45 | 19 | 53 | 9 | 26 | 5 |
| 26 | 5 | 4 | 8 | 36 | 4 | 5 | 9 | 41 | 16 | 23 | 7 | 46 | 11 | 46 | 19 | 55 | 9 | 27 | 4 |
| 27 | 5 | 15 | 8 | 54 | 4 | 14 | 9 | 47 | 16 | 35 | 7 | 52 | 11 | 47 | 19 | 57 | 9 | 28 | 3 |
| 28 | 5 | 26 | 9 | 13 | 4 | 23 | 9 | 54 | 16 | 46 | 7 | 58 | 11 | 48 | 19 | 58 | 9 | 29 | 2 |
| 29 | 5 | 37 | 9 | 31 | 4 | 31 | 10 | 1 | 16 | 57 | 8 | 4 | 11 | 48 | 19 | 59 | 9 | 29 | 1 |
| 30 | 5 | 47 | 9 | 49 | 4 | 40 | 10 | 7 | 17 | 8 | 8 | 9 | 11 | 49 | 20 | 0 | 9 | 30 | 0 |
| | *Subtr.* | | *Adde.* | | *Subtr.* | | *Subtr.* | | *Adde.* | | *Subtr.* | | *Subtr.* | | *Adde* | | *Subtr.* | | *Gr.* |
| | Sig. XI. | | | | | | Sig. X. | | | | | | Sig. IX. | | | | | | |

# TABULA ÆQUATIONUM ANNUARUM LUNÆ, APOGEI ET NODORUM.

*Anomalia Media Solis.*

| *Anomal. med. Solis.* | Sig. III. | | | | Sig. IV. | | | | Sig. V. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Æq. ☽. Adde.* | | *Apog. Subtr.* | *Nod. Adde.* | *Lunæ Adde.* | | *Apog. Subtr.* | *Nod. Adde.* | *Lunæ Adde.* | | *Apog. Subtr.* | *Nod. Adde.* | |
| *Gr.* | ′ | ″ | ′ ″ | ′ ″ | ′ | ″ | ′ ″ | ′ ″ | ′ | ″ | ′ ″ | ′ ″ | |
| 0 | 11 | 49 | 20 0 | 9 30 | 10 | 21 | 17 30 | 8 19 | 6 | 0 | 10 11 | 4 50 | 30 |
| 1 | 11 | 49 | 20 0 | 9 30 | 10 | 15 | 17 20 | 8 14 | 5 | 49 | 9 52 | 4 41 | 29 |
| 2 | 11 | 49 | 20 0 | 9 30 | 10 | 7 | 17 9 | 8 9 | 5 | 38 | 9 33 | 4 32 | 28 |
| 3 | 11 | 48 | 19 59 | 9 30 | 10 | 1 | 16 58 | 8 4 | 5 | 27 | 9 15 | 4 23 | 27 |
| 4 | 11 | 48 | 19 58 | 9 29 | 9 | 55 | 16 46 | 7 58 | 5 | 16 | 8 56 | 4 14 | 26 |
| 5 | 11 | 47 | 19 57 | 9 29 | 9 | 47 | 16 34 | 7 53 | 5 | 5 | 8 37 | 4 5 | 25 |
| 6 | 11 | 47 | 19 56 | 9 28 | 9 | 40 | 16 23 | 7 48 | 4 | 53 | 8 17 | 3 56 | 24 |
| 7 | 11 | 45 | 19 54 | 9 27 | 9 | 33 | 16 11 | 7 42 | 4 | 42 | 7 58 | 3 47 | 23 |
| 8 | 11 | 44 | 19 51 | 9 26 | 9 | 26 | 15 58 | 7 35 | 4 | 30 | 7 38 | 3 38 | 22 |
| 9 | 11 | 42 | 19 49 | 9 25 | 9 | 19 | 15 45 | 7 29 | 4 | 18 | 7 18 | 3 29 | 21 |
| 10 | 11 | 41 | 19 46 | 9 24 | 9 | 11 | 15 32 | 7 23 | 4 | 6 | 6 58 | 3 19 | 20 |
| 11 | 11 | 39 | 19 42 | 9 22 | 9 | 2 | 15 18 | 7 16 | 3 | 54 | 6 38 | 3 9 | 19 |
| 12 | 11 | 36 | 19 38 | 9 20 | 8 | 54 | 15 4 | 7 9 | 3 | 43 | 6 18 | 2 59 | 18 |
| 13 | 11 | 34 | 19 34 | 9 18 | 8 | 46 | 14 50 | 7 3 | 3 | 31 | 5 58 | 2 50 | 17 |
| 14 | 11 | 31 | 19 30 | 9 16 | 8 | 37 | 14 36 | 6 56 | 3 | 19 | 5 38 | 2 40 | 16 |
| 15 | 11 | 29 | 19 25 | 9 14 | 8 | 28 | 14 21 | 6 49 | 3 | 7 | 5 17 | 2 30 | 15 |
| 16 | 11 | 25 | 19 20 | 9 12 | 8 | 20 | 14 6 | 6 42 | 2 | 54 | 4 56 | 2 20 | 14 |
| 17 | 11 | 22 | 19 14 | 9 9 | 8 | 11 | 13 51 | 6 35 | 2 | 42 | 4 35 | 2 10 | 13 |
| 18 | 11 | 19 | 19 8 | 9 6 | 8 | 1 | 13 35 | 6 27 | 2 | 30 | 4 14 | 2 0 | 12 |
| 19 | 11 | 15 | 19 2 | 9 3 | 7 | 52 | 13 20 | 6 20 | 2 | 18 | 3 54 | 1 50 | 11 |
| 20 | 11 | 11 | 18 55 | 8 59 | 7 | 43 | 13 4 | 6 12 | 2 | 5 | 3 33 | 1 40 | 10 |
| 21 | 11 | 6 | 18 48 | 8 56 | 7 | 34 | 12 48 | 6 4 | 1 | 52 | 3 12 | 1 30 | 9 |
| 22 | 11 | 2 | 18 41 | 8 52 | 7 | 24 | 12 31 | 5 56 | 1 | 40 | 2 51 | 1 20 | 8 |
| 23 | 10 | 58 | 18 33 | 8 49 | 7 | 14 | 12 15 | 5 49 | 1 | 28 | 2 30 | 1 10 | 7 |
| 24 | 10 | 53 | 18 25 | 8 45 | 7 | 3 | 11 58 | 5 41 | 1 | 15 | 2 8 | 1 0 | 6 |
| 25 | 10 | 48 | 18 17 | 8 41 | 6 | 53 | 11 41 | 5 33 | 1 | 2 | 1 46 | 0 50 | 5 |
| 26 | 10 | 43 | 18 8 | 8 37 | 6 | 43 | 11 23 | 5 24 | 0 | 49 | 1 25 | 0 40 | 4 |
| 27 | 10 | 38 | 17 59 | 8 33 | 6 | 33 | 11 5 | 5 16 | 0 | 37 | 1 4 | 0 30 | 3 |
| 28 | 10 | 32 | 17 50 | 8 28 | 6 | 22 | 10 47 | 5 8 | 0 | 25 | 0 43 | 0 20 | 2 |
| 29 | 10 | 26 | 17 40 | 8 23 | 6 | 11 | 10 29 | 4 59 | 0 | 12 | 0 21 | 0 10 | 1 |
| 30 | 10 | 21 | 17 30 | 8 19 | 6 | 0 | 10 11 | 4 50 | 0 | 0 | 0 0 | 0 0 | 0 |
| | *Subtr.* | | *Adde.* | *Subtr.* | *Subtr.* | | *Adde.* | *Subtr.* | *Subtr.* | | *Adde.* | *Subtr.* | *Gr.* |
| | Sig. VIII. | | | | Sig. VII. | | | | Sig. VI. | | | | |

## Æquatio Semestris prima.

### Argumentum Annuum.

| Sig. | 0. 6. Subtr. | | 1. 7. Subtr. | | 2. 8. Subtr. | |
|---|---|---|---|---|---|---|
| Gr. | ′ | ″ | ′ | ″ | ′ | ″ |
| 0 | 0 | 0 | 3 | 15 | 3 | 15 |
| 1 | 0 | 8 | 3 | 19- | 3 | 11 |
| 2 | 0 | 16 | 3 | 22- | 3 | 6- |
| 3 | 0 | 23- | 3 | 25- | 3 | 2 |
| 4 | 0 | 31 | 3 | 28- | 2 | 57 |
| 5 | 0 | 39 | 3 | 31 | 2 | 52 |
| 6 | 0 | 47 | 3 | 34 | 2 | 47 |
| 7 | 0 | 54- | 3 | 36 | 2 | 41- |
| 8 | 1 | 2 | 3 | 38- | 2 | 36 |
| 9 | 1 | 9- | 3 | 40 | 2 | 30 |
| 10 | 1 | 17 | 3 | 42 | 2 | 24 |
| 11 | 1 | 24 | 3 | 43 | 2 | 18 |
| 12 | 1 | 31- | 3 | 44 | 2 | 12 |
| 13 | 1 | 38- | 3 | 44- | 2 | 5- |
| 14 | 1 | 46 | 3 | 45 | 1 | 59 |
| 15 | 1 | 52- | 3 | 45 | 1 | 52- |
| 16 | 1 | 59 | 3 | 45 | 1 | 46 |
| 17 | 2 | 5- | 3 | 44- | 1 | 38- |
| 18 | 2 | 12 | 3 | 44 | 1 | 31- |
| 19 | 2 | 18 | 3 | 43 | 1 | 24 |
| 20 | 2 | 24 | 3 | 42 | 1 | 17 |
| 21 | 2 | 30 | 3 | 40 | 1 | 9- |
| 22 | 2 | 36 | 3 | 38- | 1 | 2 |
| 23 | 2 | 41- | 3 | 36 | 0 | 54- |
| 24 | 2 | 47 | 3 | 34 | 0 | 47 |
| 25 | 2 | 52 | 3 | 31 | 0 | 39 |
| 26 | 2 | 57 | 3 | 28- | 0 | 31 |
| 27 | 3 | 2 | 3 | 25 | 0 | 23- |
| 28 | 3 | 6- | 3 | 22- | 0 | 16 |
| 29 | 3 | 11 | 3 | 19- | 0 | 8 |
| 30 | 3 | 15 | 3 | 15 | 0 | 0 |
| Sig. | 5. 11. Adde. | | 4. 10. Adde. | | 3. 9. Adde. | |

## Æquatio Semestris altera.

### Solis a Nodo Distantia.

| Sig. | 0. 6. Subtr. | | 1. 7. Subtr. | | 2. 8. Subtr. | |
|---|---|---|---|---|---|---|
| Gr. | ′ | ″ | ′ | ″ | ′ | ″ |
| 0 | 0 | 0 | 0 | 41 | 0 | 41 |
| 1 | 0 | 1- | 0 | 41- | 0 | 40 |
| 2 | 0 | 3 | 0 | 42 | 0 | 39 |
| 3 | 0 | 5 | 0 | 43 | 0 | 38 |
| 4 | 0 | 6- | 0 | 43- | 0 | 37 |
| 5 | 0 | 8 | 0 | 44 | 0 | 36 |
| 6 | 0 | 10 | 0 | 44- | 0 | 35 |
| 7 | 0 | 11- | 0 | 45 | 0 | 34 |
| 8 | 0 | 13 | 0 | 45- | 0 | 32- |
| 9 | 0 | 14- | 0 | 46 | 0 | 31- |
| 10 | 0 | 16 | 0 | 46- | 0 | 30 |
| 11 | 0 | 17- | 0 | 46- | 0 | 29 |
| 12 | 0 | 19 | 0 | 47 | 0 | 27- |
| 13 | 0 | 20- | 0 | 47 | 0 | 26- |
| 14 | 0 | 22 | 0 | 47 | 0 | 25 |
| 15 | 0 | 23- | 0 | 47 | 0 | 23- |
| 16 | 0 | 25 | 0 | 47 | 0 | 22 |
| 17 | 0 | 26- | 0 | 47 | 0 | 20- |
| 18 | 0 | 27- | 0 | 47 | 0 | 19 |
| 19 | 0 | 29 | 0 | 46- | 0 | 17- |
| 20 | 0 | 30 | 0 | 46- | 0 | 16 |
| 21 | 0 | 31- | 0 | 46 | 0 | 14- |
| 22 | 0 | 32- | 0 | 45- | 0 | 13 |
| 23 | 0 | 34 | 0 | 45 | 0 | 11- |
| 24 | 0 | 35 | 0 | 44- | 0 | 10 |
| 25 | 0 | 36 | 0 | 44 | 0 | 8 |
| 26 | 0 | 37 | 0 | 43- | 0 | 6- |
| 27 | 0 | 38 | 0 | 43 | 0 | 5 |
| 28 | 0 | 39 | 0 | 42 | 0 | 3 |
| 29 | 0 | 40 | 0 | 41- | 0 | 1- |
| 30 | 0 | 41 | 0 | 41 | 0 | 0 |
| Sig. | 5. 11. Adde. | | 4. 10. Adde. | | 3. 9. Adde. | |

## Æquatio Quarta Lunæ.

### Argument. Quartæ Æquationis.

| Sig. | 0 Add. 6 Subtr. | | 1 Add. 7 Subtr. | | 2 Add. 8 Sub. | |
|---|---|---|---|---|---|---|
| Gr. | ′ | ″ | ′ | ″ | ′ | ″ |
| 0 | 0 | 0 | 1 | 12- | 2 | 5- |
| 1 | 0 | 2- | 1 | 15 | 2 | 7 |
| 2 | 0 | 5 | 1 | 17 | 2 | 8 |
| 3 | 0 | 7- | 1 | 19 | 2 | 9 |
| 4 | 0 | 10 | 1 | 21 | 2 | 10 |
| 5 | 0 | 12- | 1 | 23 | 2 | 11 |
| 6 | 0 | 15 | 1 | 25 | 2 | 12 |
| 7 | 0 | 17- | 1 | 27 | 2 | 13 |
| 8 | 0 | 20 | 1 | 29 | 2 | 14 |
| 9 | 0 | 22- | 1 | 31 | 2 | 15 |
| 10 | 0 | 25 | 1 | 33 | 2 | 16 |
| 11 | 0 | 27- | 1 | 35 | 2 | 17 |
| 12 | 0 | 30 | 1 | 37 | 2 | 17 |
| 13 | 0 | 32- | 1 | 39 | 2 | 18 |
| 14 | 0 | 35 | 1 | 41 | 2 | 19 |
| 15 | 0 | 37- | 1 | 43 | 2 | 20 |
| 16 | 0 | 40 | 1 | 44- | 2 | 20 |
| 17 | 0 | 42 | 1 | 46 | 2 | 21 |
| 18 | 0 | 44 | 1 | 48 | 2 | 21 |
| 19 | 0 | 46- | 1 | 49- | 2 | 22 |
| 20 | 0 | 49 | 1 | 51 | 2 | 22 |
| 21 | 0 | 51- | 1 | 52- | 2 | 23 |
| 22 | 0 | 54 | 1 | 54 | 2 | 23 |
| 23 | 0 | 56- | 1 | 55- | 2 | 24 |
| 24 | 0 | 59 | 1 | 57 | 2 | 24 |
| 25 | 1 | 1 | 1 | 58 | 2 | 24 |
| 26 | 1 | 3 | 2 | 0 | 2 | 24 |
| 27 | 1 | 5- | 2 | 1- | 2 | 25 |
| 28 | 1 | 8 | 2 | 3 | 2 | 25 |
| 29 | 1 | 10- | 2 | 4- | 2 | 25 |
| 30 | 1 | 12- | 2 | 5 | 2 | 25 |
| Sig. | 5 Add. 11 Sub. | | 4 Add. 10 Sub. | | 3 Add. 9 Sub. | |

# TABULA ÆQUATIONUM APOGEI ET ECCENTRICITATUM ORBIS LUNÆ.

Sig. O. VI.

| Argument. Ann. | Æqu. Lunæ | Apog. Adde. | | Diff. | | Eccentric. Orbis Lunæ ad Radium 1. | Diff. | Logarithmi harum Eccentricitatum. | Logarithmi pro Æquatione centri Lunæ. | Diff. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gr. | o. | ′ | ″ | ′ | ″ | | | | | | |
| 0 | 0 | 0 | 0 | | | ,066777 | | 8 824629 | 9 941912 | | 30 |
| | | | | 21 | 4 | | 5 | | | 5 | |
| 1 | 0 | 21 | 4 | | | ,066771 | | 8 824590 | 9 941917 | | 29 |
| 2 | 0 | 42 | 8 | 21 | 4 | ,066754 | 17 | 8 824475 | 9 941932 | 15 | 28 |
| 3 | 1 | 3 | 10 | 21 | 2 | ,066724 | 30 | 8 824284 | 9 941958 | 26 | 27 |
| 4 | 1 | 24 | 9 | 20 | 59 | ,066683 | 41 | 8 824016 | 9 941994 | 36 | 26 |
| 5 | 1 | 45 | 5 | 20 | 56 | ,066630 | 53 | 8 823671 | 9 942040 | 46 | 25 |
| | | | | 20 | 52 | | 64 | | | 56 | |
| 6 | 2 | 5 | 57 | | | ,066566 | | 8 823252 | 9 942096 | | 24 |
| 7 | 2 | 26 | 44 | 20 | 47 | ,066489 | 76 | 8 822753 | 9 942163 | 67 | 23 |
| 8 | 2 | 47 | 25 | 20 | 41 | ,066402 | 88 | 8 822179 | 9 942239 | 76 | 22 |
| 9 | 3 | 8 | 0 | 20 | 35 | ,066302 | 100 | 8 821529 | 9 942326 | 87 | 21 |
| 10 | 3 | 28 | 27 | 20 | 27 | ,066192 | 110 | 8 820803 | 9 942422 | 96 | 20 |
| | | | | 20 | 19 | | 121 | | | 107 | |
| 11 | 3 | 48 | 46 | | | ,066070 | | 8 820001 | 9 942529 | | 19 |
| 12 | 4 | 8 | 55 | 20 | 9 | ,065936 | 133 | 8 819124 | 9 942645 | 116 | 18 |
| 13 | 4 | 28 | 54 | 19 | 59 | ,065792 | 144 | 8 818170 | 9 942771 | 126 | 17 |
| 14 | 4 | 48 | 42 | 19 | 48 | ,065636 | 156 | 8 817142 | 9 942907 | 135 | 16 |
| 15 | 5 | 8 | 19 | 19 | 37 | ,065469 | 167 | 8 816038 | 9 943053 | 146 | 15 |
| | | | | 19 | 24 | | 177 | | | 155 | |
| 16 | 5 | 27 | 43 | | | ,065292 | | 8 814858 | 9 943208 | | 14 |
| 17 | 5 | 46 | 53 | 19 | 10 | ,065103 | 188 | 8 813604 | 9 943372 | 164 | 13 |
| 18 | 6 | 5 | 48 | 18 | 55 | ,064905 | 198 | 8 812275 | 9 943545 | 173 | 12 |
| 19 | 6 | 24 | 27 | 18 | 39 | ,064695 | 209 | 8 810873 | 9 943728 | 183 | 11 |
| 20 | 6 | 42 | 50 | 18 | 23 | ,064476 | 219 | 8 809397 | 9 943919 | 191 | 10 |
| | | | | 18 | 6 | | 230 | | | 201 | |
| 21 | 7 | 0 | 56 | | | ,064246 | | 8 807847 | 9 944120 | | 9 |
| 22 | 7 | 18 | 44 | 17 | 48 | ,064006 | 239 | 8 806223 | 9 944329 | 209 | 8 |
| 23 | 7 | 36 | 12 | 17 | 28 | ,063757 | 249 | 8 804528 | 9 944546 | 217 | 7 |
| 24 | 7 | 53 | 20 | 17 | 8 | ,063498 | 259 | 8 802760 | 9 944772 | 226 | 6 |
| 25 | 8 | 10 | 6 | 16 | 46 | ,063230 | 268 | 8 800920 | 9 945006 | 234 | 5 |
| | | | | 16 | 23 | | 277 | | | 242 | |
| 26 | 8 | 26 | 29 | | | ,062952 | | 8 799009 | 9 945248 | | 4 |
| 27 | 8 | 42 | 29 | 16 | 0 | ,062665 | 287 | 8 797028 | 9 945498 | 250 | 3 |
| 28 | 8 | 58 | 5 | 15 | 36 | ,062370 | 295 | 8 794978 | 9 945755 | 257 | 2 |
| 29 | 9 | 13 | 15 | 15 | 10 | ,062066 | 303 | 8 792857 | 9 946020 | 265 | 1 |
| 30 | 9 | 27 | 57 | 14 | 42 | ,061754 | 312 | 8 790668 | 9 946292 | 272 | 0 |
| | Subtrahe. | | | Diff. | | | Diff. | | | Diff. | Gr. |

Sig. V. XI.

## TABULA ÆQUATIONUM APOGEI ET ECCENTRICITATUM ORBIS LUNÆ.

### Sig. I. VII.

| Argument. Ann. | Æqu. Lunæ Apog. Adde. | | | Diff. | | Eccentric. Orbis Lunæ ad Radium 1. | Diff. | Logarithmi harum Eccentricitatum. | Logarithmi pro Æquatione centri Lunæ. | Diff. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gr. | o. | ′ | ″ | ′ | ″ | | | | | | |
| 0 | 9 | 27 | 57 | | | ,061754 | | 8 790668 | 9 946292 | | 30 |
| | | | | 14 | 15 | | 320 | | | 279 | |
| 1 | 9 | 42 | 12 | | | ,061434 | | 8 788412 | 9 946571 | | 29 |
| | | | | 13 | 46 | | 327 | | | 286 | |
| 2 | 9 | 55 | 58 | | | ,061107 | | 8 786089 | 9 946857 | | 28 |
| | | | | 13 | 16 | | 335 | | | 292 | |
| 3 | 10 | 9 | 14 | | | ,060772 | | 8 783701 | 9 947149 | | 27 |
| | | | | 12 | 44 | | 342 | | | 298 | |
| 4 | 10 | 21 | 58 | | | ,060429 | | 8 781248 | 9 947448 | | 26 |
| | | | | 12 | 11 | | 349 | | | 304 | |
| 5 | 10 | 34 | 9 | | | ,060080 | | 8 778732 | 9 947752 | | 25 |
| | | | | 11 | 38 | | 355 | | | 310 | |
| 6 | 10 | 45 | 47 | | | ,059725 | | 8 776153 | 9 948062 | | 24 |
| | | | | 11 | 2 | | 362 | | | 315 | |
| 7 | 10 | 56 | 49 | | | ,059363 | | 8 773513 | 9 948377 | | 23 |
| | | | | 10 | 26 | | 368 | | | 320 | |
| 8 | 11 | 7 | 15 | | | ,058995 | | 8 770814 | 9 948698 | | 22 |
| | | | | 9 | 49 | | 373 | | | 325 | |
| 9 | 11 | 17 | 4 | | | ,058621 | | 8 768057 | 9 949023 | | 21 |
| | | | | 9 | 10 | | 378 | | | 330 | |
| 10 | 11 | 26 | 14 | | | ,058243 | | 8 765243 | 9 949353 | | 20 |
| | | | | 8 | 29 | | 383 | | | 334 | |
| 11 | 11 | 34 | 43 | | | ,057860 | | 8 762375 | 9 949687 | | 19 |
| | | | | 7 | 48 | | 388 | | | 338 | |
| 12 | 11 | 42 | 31 | | | ,057472 | | 8 759454 | 9 950025 | | 18 |
| | | | | 7 | 5 | | 392 | | | 341 | |
| 13 | 11 | 49 | 36 | | | ,057080 | | 8 756482 | 9 950367 | | 17 |
| | | | | 6 | 21 | | 396 | | | 345 | |
| 14 | 11 | 55 | 57 | | | ,056684 | | 8 753461 | 9 950712 | | 16 |
| | | | | 5 | 36 | | 399 | | | 347 | |
| 15 | 12 | 1 | 33 | | | ,056285 | | 8 750395 | 9 951059 | | 15 |
| | | | | 4 | 49 | | 401 | | | 350 | |
| 16 | 12 | 6 | 22 | | | ,055884 | | 8 747284 | 9 951409 | | 14 |
| | | | | 4 | 1 | | 404 | | | 352 | |
| 17 | 12 | 10 | 23 | | | ,055479 | | 8 744131 | 9 951761 | | 13 |
| | | | | 3 | 12 | | 406 | | | 354 | |
| 18 | 12 | 13 | 35 | | | ,055073 | | 8 740941 | 9 952115 | | 12 |
| | | | | 2 | 21 | | 407 | | | 355 | |
| 19 | 12 | 15 | 56 | | | ,054666 | | 8 737714 | 9 952470 | | 11 |
| | | | | 1 | 28 | | 409 | | | 356 | |
| 20 | 12 | 17 | 24 | | | ,054257 | | 8 734455 | 9 952827 | | 10 |
| | | | | 0 | 35 | | 409 | | | 356 | |
| 21 | 12 | 17 | 59 | | | ,053848 | | 8 731167 | 9 953183 | | 9 |
| | | | | 0 | 19 | | 410 | | | 356 | |
| 22 | 12 | 17 | 40 | | | ,053438 | | 8 727853 | 9 953540 | | 8 |
| | | | | 1 | 15 | | 408 | | | 356 | |
| 23 | 12 | 16 | 25 | | | ,053030 | | 8 724518 | 9 953896 | | 7 |
| | | | | 2 | 12 | | 408 | | | 355 | |
| 24 | 12 | 14 | 13 | | | ,052622 | | 8 721164 | 9 954251 | | 6 |
| | | | | 3 | 11 | | 407 | | | 354 | |
| 25 | 12 | 11 | 2 | | | ,052215 | | 8 717796 | 9 954605 | | 5 |
| | | | | 4 | 10 | | 404 | | | 352 | |
| 26 | 12 | 6 | 52 | | | ,051811 | | 8 714419 | 9 954957 | | 4 |
| | | | | 5 | 10 | | 402 | | | 350 | |
| 27 | 12 | 1 | 42 | | | ,051409 | | 8 711037 | 9 955307 | | 3 |
| | | | | 6 | 11 | | 399 | | | 347 | |
| 28 | 11 | 55 | 31 | | | ,051010 | | 8 707654 | 9 955655 | | 2 |
| | | | | 7 | 14 | | 395 | | | 344 | |
| 29 | 11 | 48 | 17 | | | ,050615 | | 8 704277 | 9 955999 | | 1 |
| | | | | 8 | 17 | | 391 | | | 340 | |
| 30 | 11 | 40 | 0 | | | ,050224 | | 8 700910 | 9 956339 | | 0 |
| | Subtrahe. | | | Diff. | | | Diff. | | | Diff. | Gr. |

### Sig. IV. X.

# TABULA ÆQUATIONUM APOGEI ET ECCENTRICITATUM ORBIS LUNÆ.

## Sig. II. VIII.

| Argument. Ann. | Æqu. Lunæ Apog. Adde. | | | Diff. | | Eccentric. Orbis Lunæ ad Radium 1. | Diff. | Logarithmi harum Eccentricitatum. | Logarithmi pro Æquatione centri Lunæ. | Diff. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Gr. | o. | ′ | ″ | ′ | ″ | | | | | | |
| 0 | 11 | 40 | 0 | | | ,050224 | | 8 700910 | 9 956339 | | 30 |
| | | | | 9 | 21 | | 386 | | | 336 | |
| 1 | 11 | 30 | 39 | | | ,049838 | | 8 697559 | 9 956675 | | 29 |
| | | | | 10 | 25 | | 381 | | | 331 | |
| 2 | 11 | 20 | 14 | | | ,049457 | | 8 694229 | 9 957007 | | 28 |
| | | | | 11 | 30 | | 374 | | | 326 | |
| 3 | 11 | 8 | 44 | | | ,049082 | | 8 690927 | 9 957333 | | 27 |
| | | | | 12 | 36 | | 368 | | | 320 | |
| 4 | 10 | 56 | 8 | | | ,048714 | | 8 687658 | 9 957653 | | 26 |
| | | | | 13 | 42 | | 360 | | | 314 | |
| 5 | 10 | 42 | 26 | | | ,048354 | | 8 684430 | 9 957968 | | 25 |
| | | | | 14 | 48 | | 353 | | | 307 | |
| 6 | 10 | 27 | 38 | | | ,048001 | | 8 681247 | 9 958275 | | 24 |
| | | | | 15 | 53 | | 345 | | | 300 | |
| 7 | 10 | 11 | 45 | | | ,047656 | | 8 678118 | 9 958575 | | 23 |
| | | | | 16 | 58 | | 335 | | | 292 | |
| 8 | 9 | 54 | 47 | | | ,047321 | | 8 675050 | 9 958867 | | 22 |
| | | | | 18 | 3 | | 325 | | | 284 | |
| 9 | 9 | 36 | 44 | | | ,046995 | | 8 672049 | 9 959151 | | 21 |
| | | | | 19 | 7 | | 316 | | | 274 | |
| 10 | 9 | 17 | 37 | | | ,046679 | | 8 669121 | 9 959426 | | 20 |
| | | | | 20 | 12 | | 305 | | | 265 | |
| 11 | 8 | 57 | 25 | | | ,046374 | | 8 666277 | 9 959691 | | 19 |
| | | | | 21 | 14 | | 293 | | | 255 | |
| 12 | 8 | 36 | 11 | | | ,046081 | | 8 663520 | 9 959946 | | 18 |
| | | | | 22 | 15 | | 281 | | | 245 | |
| 13 | 8 | 13 | 56 | | | ,045800 | | 8 660861 | 9 960191 | | 17 |
| | | | | 23 | 14 | | 269 | | | 234 | |
| 14 | 7 | 50 | 42 | | | ,045531 | | 8 658305 | 9 960425 | | 16 |
| | | | | 24 | 13 | | 256 | | | 222 | |
| 15 | 7 | 26 | 29 | | | ,045275 | | 8 655859 | 9 960648 | | 15 |
| | | | | 25 | 8 | | 242 | | | 210 | |
| 16 | 7 | 1 | 21 | | | ,045033 | | 8 653532 | 9 960858 | | 14 |
| | | | | 26 | 2 | | 227 | | | 198 | |
| 17 | 6 | 35 | 19 | | | ,044805 | | 8 651331 | 9 961056 | | 13 |
| | | | | 26 | 53 | | 213 | | | 186 | |
| 18 | 6 | 8 | 26 | | | ,044592 | | 8 649261 | 9 961242 | | 12 |
| | | | | 27 | 41 | | 198 | | | 172 | |
| 19 | 5 | 40 | 45 | | | ,044394 | | 8 647329 | 9 961414 | | 11 |
| | | | | 28 | 27 | | 182 | | | 159 | |
| 20 | 5 | 12 | 18 | | | ,044212 | | 8 645542 | 9 961573 | | 10 |
| | | | | 29 | 8 | | 166 | | | 144 | |
| 21 | 4 | 43 | 10 | | | ,044046 | | 8 643906 | 9 961717 | | 9 |
| | | | | 29 | 47 | | 150 | | | 131 | |
| 22 | 4 | 13 | 23 | | | ,043896 | | 8 642426 | 9 961848 | | 8 |
| | | | | 30 | 22 | | 133 | | | 115 | |
| 23 | 3 | 43 | 1 | | | ,043763 | | 8 641108 | 9 961963 | | 7 |
| | | | | 30 | 52 | | 116 | | | 101 | |
| 24 | 3 | 12 | 9 | | | ,043647 | | 8 639954 | 9 962064 | | 6 |
| | | | | 31 | 20 | | 98 | | | 86 | |
| 25 | 2 | 40 | 49 | | | 043548 | | 8 638973 | 9 962150 | | 5 |
| | | | | 31 | 42 | | 81 | | | 71 | |
| 26 | 2 | 9 | 7 | | | ,043467 | | 8 638164 | 9 962221 | | 4 |
| | | | | 32 | 1 | | 63 | | | 55 | |
| 27 | 1 | 37 | 6 | | | ,043404 | | 8 637532 | 9 962276 | | 3 |
| | | | | 32 | 14 | | 45 | | | 39 | |
| 28 | 1 | 4 | 52 | | | ,043359 | | 8 637079 | 9 962315 | | 2 |
| | | | | 32 | 24 | | 27 | | | 24 | |
| 29 | 0 | 32 | 28 | | | ,043332 | | 8 636806 | 9 962339 | | 1 |
| | | | | 32 | 28 | | 9 | | | 8 | |
| 30 | 0 | 0 | 0 | | | ,043323 | | 8 636715 | 9 962347 | | 0 |
| | Subtrahe. | | | Diff. | | | Diff. | | | Diff. | Gr. |

## Sig. III. IX.

## TABULA PRO EXPEDIENDO CALCULO ÆQUATIONIS CENTRI LUNÆ.

### Medii Lunæ loci ab Apogeo æquato distantia.

| Sig. o. *Adde.* | | | | | | Sig. I. *Adde.* | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Log.* | 9 942 | 9 947 | 9 952 | 9 957 | 9 962 | 9 942 | 9 947 | 9 952 | 9 957 | 9 962 |
| *Gr.* | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ |
| 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 1 42 | 1 25 | 1 9- | 0 55- | 0 43- |
| 1 | 0 4 | 0 3- | 0 3 | 0 2 | 0 2 | 1 44 | 1 27 | 1 11 | 0 57 | 0 44 |
| 2 | 0 8 | 0 7 | 0 5- | 0 4 | 0 3- | 1 46 | 1 28- | 1 12- | 0 58 | 0 45 |
| 3 | 0 12 | 0 10 | 0 8- | 0 6- | 0 5 | 1 48 | 1 30 | 1 14 | 0 59 | 0 46 |
| 4 | 0 16 | 0 13 | 0 11 | 0 9 | 0 7 | 1 49- | 1 31- | 1 15 | 1 0 | 0 46- |
| 5 | 0 20 | 0 16- | 0 13- | 0 11 | 0 8- | 1 51 | 1 33 | 1 16 | 1 1 | 0 47- |
| 6 | 0 24 | 0 20 | 0 16 | 0 13 | 0 10 | 1 53 | 1 34 | 1 17 | 1 1- | 0 48 |
| 7 | 0 28 | 0 23 | 0 19 | 0 15 | 0 12 | 1 54- | 1 35- | 1 18 | 1 2- | 0 48- |
| 8 | 0 31- | 0 26 | 0 21- | 0 17 | 0 13- | 1 56 | 1 36- | 1 19 | 1 3 | 0 49 |
| 9 | 0 35 | 0 29- | 0 24 | 0 19- | 0 15- | 1 57 | 1 37- | 1 20 | 1 4 | 0 49- |
| 10 | 0 39 | 0 33 | 0 27 | 0 21- | 0 17 | 1 58 | 1 38- | 1 20- | 1 4- | 0 50 |
| 11 | 0 43 | 0 36 | 0 29- | 0 23- | 0 18- | 1 59 | 1 39- | 1 21- | 1 5 | 0 50- |
| 12 | 0 46- | 0 39 | 0 32 | 0 25- | 0 20 | 2 0 | 1 40 | 1 22 | 1 5 | 0 51 |
| 13 | 0 50 | 0 42 | 0 34- | 0 28 | 0 21- | 2 0- | 1 40- | 1 22 | 1 5- | 0 51 |
| 14 | 0 54 | 0 45 | 0 37 | 0 30 | 0 23 | 2 1 | 1 41 | 1 22- | 1 6 | 0 51 |
| 15 | 0 57- | 0 48 | 0 39- | 0 32 | 0 24- | 2 1 | 1 41 | 1 23 | 1 6 | 0 51 |
| 16 | 1 1 | 0 51 | 0 42 | 0 33- | 0 26 | 2 2 | 1 41- | 1 23 | 1 6 | 0 51- |
| 17 | 1 4- | 0 54 | 0 44- | 0 35- | 0 27- | 2 2- | 1 41- | 1 23 | 1 6 | 0 51- |
| 18 | 1 8 | 0 57 | 0 46- | 0 37 | 0 29 | 2 2 | 1 42 | 1 23 | 1 6 | 0 51 |
| 19 | 1 11 | 0 59- | 0 48- | 0 39 | 0 30- | 2 2 | 1 41- | 1 23 | 1 6 | 0 51 |
| 20 | 1 14- | 1 2 | 0 51 | 0 41 | 0 32 | 2 2 | 1 41- | 1 23 | 1 6 | 0 51 |
| 21 | 1 18 | 1 4- | 0 53 | 0 42- | 0 33- | 2 1- | 1 41 | 1 22- | 1 5- | 0 50- |
| 22 | 1 21 | 1 7 | 0 55 | 0 44 | 0 34- | 2 1 | 1 40- | 1 22 | 1 5 | 0 50- |
| 23 | 1 24 | 1 9- | 0 57 | 0 46 | 0 36 | 2 0- | 1 40 | 1 21- | 1 4- | 0 50 |
| 24 | 1 26- | 1 12 | 0 59 | 0 47- | 0 37 | 1 59- | 1 39- | 1 21 | 1 4 | 0 50 |
| 25 | 1 29- | 1 14- | 1 1 | 0 49 | 0 38 | 1 58 | 1 38- | 1 20- | 1 3- | 0 49- |
| 26 | 1 32 | 1 17 | 1 3 | 0 50- | 0 39 | 1 57- | 1 37- | 1 19- | 1 3 | 0 49 |
| 27 | 1 34- | 1 19 | 1 4- | 0 52 | 0 40- | 1 56- | 1 36 | 1 19 | 1 2- | 0 48- |
| 28 | 1 37 | 1 21 | 1 6 | 0 53 | 0 41- | 1 55 | 1 35 | 1 18 | 1 1- | 0 48 |
| 29 | 1 39- | 1 23 | 1 7- | 0 54- | 0 42- | 1 54 | 1 34 | 1 17 | 1 1 | 0 47- |
| 30 | 1 42 | 1 25 | 1 9- | 0 55- | 0 43- | 1 52- | 1 33 | 1 15- | 1 0 | 0 46- |

## TABULA PRO EXPEDIENDO CALCULO ÆQUATIONIS CENTRI LUNÆ.

### *Medii Lunæ loci ab Apogæo æquato distantia.*

| Sig. II. *Adde.* | | | | | | Sig. III. *Adde.* | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Log* | 9 942 | 9 947 | 9 952 | 9 957 | 9 962 | 9 942 | 9 947 | 9 952 | 9 957 | 9 962 |
| *Gr.* | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ |
| 0 | 1 52- | 1 33 | 1 15- | 1 0 | 0 46- | 0 20 | 0 15- | 0 11- | 0 8 | 0 6 |
| 1 | 1 51 | 1 31- | 1 14- | 0 59 | 0 46 | 0 16 | 0 12 | 0 9 | 0 6 | 0 4- |
| 2 | 1 49 | 1 30 | 1 13 | 0 58 | 0 45 | 0 12 | 0 9 | 0 6 | 0 4 | 0 2- |
| 3 | 1 47 | 1 28- | 1 11- | 0 57 | 0 44 | 0 8 | 0 5- | 0 3 | 0 2 | 0 1 |
| 4 | 1 45 | 1 26- | 1 10 | 0 56 | 0 43 | 0 4 | 0 2 | 0 0- | *Sub.* 0- | *Sub.* 1 |
| 5 | 1 43 | 1 25 | 1 8- | 0 54- | 0 42 | *Subtr.* | *Sub.* 1 | *Sub.* 2- | 0 2- | 0 3 |
| 6 | 1 40- | 1 23 | 1 7 | 0 53 | 0 41 | 0 4 | 0 4- | 0 5 | 0 5 | 0 4- |
| 7 | 1 38- | 1 21 | 1 5- | 0 52 | 0 40 | 0 8 | 0 8 | 0 7- | 0 7 | 0 6 |
| 8 | 1 36 | 1 19 | 1 4 | 0 50- | 0 39 | 0 12 | 0 11 | 0 10 | 0 9 | 0 8 |
| 9 | 1 33- | 1 17 | 1 2 | 0 49 | 0 38 | 0 16 | 0 14- | 0 13 | 0 11 | 0 10 |
| 10 | 1 30- | 1 14- | 1 0 | 0 47- | 0 36- | 0 20 | 0 18 | 0 16 | 0 13- | 0 11- |
| 11 | 1 28 | 1 12 | 0 58 | 0 46 | 0 35- | 0 24 | 0 21- | 0 18- | 0 16 | 0 13- |
| 12 | 1 25 | 1 9- | 0 56 | 0 44 | 0 34 | 0 27- | 0 24- | 0 21 | 0 18 | 0 14- |
| 13 | 1 22 | 1 7 | 0 54 | 0 42- | 0 32- | 0 31- | 0 27- | 0 24 | 0 20 | 0 16 |
| 14 | 1 19 | 1 4- | 0 52 | 0 41 | 0 31 | 0 35 | 0 31 | 0 26- | 0 22 | 0 18 |
| 15 | 1 16 | 1 2 | 0 50 | 0 39 | 0 30 | 0 39 | 0 34 | 0 29 | 0 24 | 0 19- |
| 16 | 1 12- | 0 59 | 0 47- | 0 37 | 0 28- | 0 43 | 0 37 | 0 31- | 0 26 | 0 21 |
| 17 | 1 9 | 0 56 | 0 45 | 0 35 | 0 27 | 0 46- | 0 40 | 0 34 | 0 28 | 0 22- |
| 18 | 1 5- | 0 53- | 0 43 | 0 33- | 0 25- | 0 50 | 0 43 | 0 36 | 0 30 | 0 24 |
| 19 | 1 2 | 0 50- | 0 40- | 0 31- | 0 24 | 0 53- | 0 46 | 0 38- | 0 32 | 0 25- |
| 20 | 0 58- | 0 47- | 0 38 | 0 29- | 0 22 | 0 57 | 0 48- | 0 41 | 0 33- | 0 27 |
| 21 | 0 55 | 0 44- | 0 35- | 0 27- | 0 20- | 1 0- | 0 51 | 0 43 | 0 35- | 0 28- |
| 22 | 0 51 | 0 41- | 0 33 | 0 25- | 0 19 | 1 3- | 0 54 | 0 45- | 0 37 | 0 29- |
| 23 | 0 47- | 0 38- | 0 30- | 0 23 | 0 17- | 0 6- | 0 56- | 0 47- | 0 39 | 0 31- |
| 24 | 0 44 | 0 35 | 0 28 | 0 21 | 0 16 | 1 9- | 0 59 | 0 49- | 0 40- | 0 32 |
| 25 | 0 40 | 0 32 | 0 25 | 0 19 | 0 14 | 1 12- | 1 1- | 0 51- | 0 42 | 0 33 |
| 26 | 0 36 | 0 28- | 0 22- | 0 17 | 0 12- | 1 15- | 1 4 | 0 53- | 0 43- | 0 34- |
| 27 | 0 32 | 0 25 | 0 20 | 0 15 | 0 11 | 1 18- | 1 6- | 0 55 | 0 45 | 0 36 |
| 28 | 0 28 | 0 22 | 0 17 | 0 12- | 0 9 | 1 21 | 1 9 | 0 57 | 0 46- | 0 37 |
| 29 | 0 24 | 0 19 | 0 14 | 0 10 | 0 7- | 1 23- | 1 11 | 0 59 | 0 48 | 0 38 |
| 30 | 0 20 | 0 15- | 0 11- | 0 8 | 0 6 | 1 26 | 1 13 | 1 0- | 0 49 | 0 39 |

## TABULA PRO EXPEDIENDO CALCULO ÆQUATIONIS CENTRI LUNÆ.

### *Medii Lunæ loci ab Apogæo æquato distantia.*

| Sig. IV. *Subtrahe.* | | | | | | Sig. V. *Subtrahe.* | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Log.* | 9 942 | 9 947 | 9 952 | 9 957 | 9 962 | 9 942 | 9 947 | 9 952 | 9 957 | 9 962 | |
| *Gr.* | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | |
| 0 | 1 26 | 1 13 | 1 0- | 0 49 | 0 39 | 1 36- | 1 21 | 1 6- | 0 53 | 0 42 | |
| 1 | 1 29 | 1 15 | 1 2 | 0 50 | 0 40 | 1 35 | 1 19- | 1 5- | 0 52- | 0 41 | |
| 2 | 1 30- | 1 16- | 1 3- | 0 51 | 0 41 | 1 33 | 1 18 | 1 4 | 0 51- | 0 40 | |
| 3 | 1 32- | 1 18- | 1 5 | 0 52 | 0 42 | 1 31 | 1 16 | 1 2- | 0 50- | 0 39 | |
| 4 | 1 34- | 1 20 | 1 6 | 0 53- | 0 42- | 1 28- | 1 14 | 1 1 | 0 49 | 0 38 | |
| 5 | 1 36- | 1 21- | 1 7 | 0 54- | 0 43- | 1 26- | 1 12 | 0 59- | 0 47- | 0 37 | |
| 6 | 1 38 | 1 23 | 1 8- | 0 55- | 0 44 | 1 24 | 1 10 | 0 57- | 0 46 | 0 36 | |
| 7 | 1 39- | 1 24- | 1 9- | 0 56 | 0 44- | 1 21- | 1 8 | 0 56 | 0 44- | 0 35 | |
| 8 | 1 41 | 1 25- | 1 10- | 0 57 | 0 45 | 1 18- | 1 6 | 0 54 | 0 43 | 0 34 | |
| 9 | 1 42- | 1 26- | 1 11- | 0 57- | 0 45- | 1 16 | 1 3- | 0 52 | 0 41- | 0 33 | |
| 10 | 1 44 | 1 27- | 1 12 | 0 58 | 0 46 | 1 13 | 1 1 | 0 50 | 0 40 | 0 31- | |
| 11 | 1 45 | 1 28- | 1 13 | 0 58- | 0 46 | 1 10 | 0 58- | 0 48 | 0 38- | 0 30- | |
| 12 | 1 45- | 1 29 | 1 13- | 0 59 | 0 46- | 1 7 | 0 56 | 0 46 | 0 37 | 0 29 | |
| 13 | 1 46 | 1 29- | 1 13- | 0 59- | 0 46- | 1 3- | 0 53- | 0 43- | 0 35 | 0 27- | |
| 14 | 1 47 | 1 30 | 1 14 | 1 0 | 0 47 | 1 0 | 0 50- | 0 41- | 0 33 | 0 26 | |
| 15 | 1 47 | 1 30 | 1 14- | 1 0 | 0 47- | 0 57 | 0 48 | 0 39- | 0 31- | 0 24- | |
| 16 | 1 47- | 1 30- | 1 14- | 1 0 | 0 47- | 0 53- | 0 45 | 0 37 | 0 29- | 0 23 | |
| 17 | 1 48 | 1 30- | 1 15 | 1 0 | 0 47- | 0 50 | 0 42 | 0 34- | 0 27- | 0 21- | |
| 18 | 1 48 | 1 30- | 1 15 | 1 0 | 0 47- | 0 46- | 0 39 | 0 32 | 0 25- | 0 20 | |
| 19 | 1 48 | 1 30- | 1 15 | 1 0 | 0 47 | 0 43 | 0 36 | 0 29- | 0 23- | 0 18- | |
| 20 | 1 47- | 1 30 | 1 14- | 1 0 | 0 47 | 0 39 | 0 33 | 0 27 | 0 21- | 0 17 | |
| 21 | 1 47 | 1 30 | 1 14 | 0 59- | 0 47 | 0 35- | 0 29- | 0 24 | 0 19- | 0 15- | |
| 22 | 1 46- | 1 29- | 1 13- | 0 59 | 0 46- | 0 31- | 0 26- | 0 21- | 0 17 | 0 13- | |
| 23 | 1 45- | 1 29 | 1 13 | 0 58- | 0 46 | 0 28 | 0 23 | 0 19 | 0 15 | 0 12 | |
| 24 | 1 44- | 1 28 | 1 12- | 0 58 | 0 45- | 0 24 | 0 20 | 0 16 | 0 13 | 0 10 | |
| 25 | 1 43- | 1 27 | 1 12 | 0 57- | 0 45 | 0 20 | 0 16- | 0 13- | 0 11 | 0 8- | |
| 26 | 1 42- | 1 26 | 1 11 | 0 57 | 0 44- | 0 16 | 0 13 | 0 11 | 0 9 | 0 7 | |
| 27 | 1 41 | 1 25 | 1 10 | 0 56- | 0 44 | 0 12 | 0 10 | 0 8- | 0 7 | 0 5- | |
| 28 | 1 40 | 1 24 | 1 9 | 0 55- | 0 43- | 0 8 | 0 7 | 0 5- | 0 4- | 0 3- | |
| 29 | 1 38- | 1 22 | 1 8 | 0 54- | 0 43 | 0 4 | 0 3- | 0 3 | 0 2 | 0 2 | |
| 30 | 1 36- | 1 21 | 1 6- | 0 53- | 0 42 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | |

## TABULA VARIATIONIS *sive* REFLECTIONIS.

*Lunæ æquatæ a Sole distantia.*

| Sig. | 0. VI. *Adde.* | I. VII. *Adde.* | II. VIII. *Adde.* | |
|---|---|---|---|---|
| *Gr.* | ′ ″ | ′ ″ | ′ ″ | |
| 0 | 0 0 | 30 27 | 30 27 | 30 |
| 1 | 1 14 | 31 3 | 29 49 | 29 |
| 2 | 2 27 | 31 36- | 29 9- | 28 |
| 3 | 3 40- | 32 7- | 28 27 | 27 |
| 4 | 4 54 | 32 36 | 27 43 | 26 |
| 5 | 6 6- | 33 3 | 26 56- | 25 |
| 6 | 7 19 | 33 27 | 26 8 | 24 |
| 7 | 8 30- | 33 48 | 25 18 | 23 |
| 8 | 9 41- | 34 7- | 24 26 | 22 |
| 9 | 10 52 | 34 24 | 23 32 | 21 |
| 10 | 12 2 | 34 38 | 22 36 | 20 |
| 11 | 13 10- | 34 50 | 21 39 | 19 |
| 12 | 14 18 | 34 59 | 20 40 | 18 |
| 13 | 15 25 | 35 5- | 19 40 | 17 |
| 14 | 16 30- | 35 9 | 18 38 | 16 |
| 15 | 17 35 | 35 10 | 17 35 | 15 |
| 16 | 18 38 | 35 9 | 16 30- | 14 |
| 17 | 19 40 | 35 5- | 15 25 | 13 |
| 18 | 20 40 | 34 59 | 14 18 | 12 |
| 19 | 21 39 | 34 50 | 13 10- | 11 |
| 20 | 22 36 | 34 38 | 12 2 | 10 |
| 21 | 23 32 | 34 24 | 10 52 | 9 |
| 22 | 24 26 | 34 7- | 9 41- | 8 |
| 23 | 25 18 | 33 48 | 8 30- | 7 |
| 24 | 26 8 | 33 27 | 7 19 | 6 |
| 25 | 26 56- | 33 3 | 6 6- | 5 |
| 26 | 27 43 | 32 36 | 4 54 | 4 |
| 27 | 28 27 | 32 7- | 3 40- | 3 |
| 28 | 29 9- | 31 36- | 2 27 | 2 |
| 29 | 29 49 | 31 3 | 1 14 | 1 |
| 30 | 30 27 | 30 27 | 0 0 | 0 |
| Sig. | V. XI. *Subtr.* | IV. X. *Subtr.* | III. IX. *Subtr.* | *Gr.* |

## LOGARITHMI PRO CORRECTIONE VARIATIONIS.

*Anomalia Media Solis.*

| | Sig. 0. | Sig. I. | Sig. II. | |
|---|---|---|---|---|
| *Gr.* | *Logar.* | *Logar.* | *Logar.* | |
| 0 | 0 0242 | 0 0211 | 0 0125 | 30 |
| 2 | 0 0242 | 0 0207 | 0 0118- | 28 |
| 4 | 0 0242 | 0 0203 | 0 0110- | 26 |
| 6 | 0 0241 | 0 0198- | 0 0102- | 24 |
| 8 | 0 0240 | 0 0193- | 0 0095 | 22 |
| 10 | 0 0239 | 0 0188 | 0 0087 | 20 |
| 12 | 0 0237- | 0 0182- | 0 0079 | 18 |
| 14 | 0 0235- | 0 0177 | 0 0071 | 16 |
| 16 | 0 0233- | 0 0171 | 0 0063 | 14 |
| 18 | 0 0231 | 0 0165 | 0 0055 | 12 |
| 20 | 0 0229 | 0 0159 | 0 0046 | 10 |
| 22 | 0 0226 | 0 0153 | 0 0038 | 8 |
| 24 | 0 0223 | 0 0146 | 0 0029- | 6 |
| 26 | 0 0219 | 0 0139 | 0 0021 | 4 |
| 28 | 0 0215 | 0 0132 | 0 0012- | 2 |
| 30 | 0 0211 | 0 0125 | 0 0004 | 0 |
| | Sig. XI. | Sig. X. | Sig. IX. | *Gr.* |

| *Gr.* | Sig. III. | Sig. IV. | Sig. V. | |
|---|---|---|---|---|
| 0 | 0 0004 | 9 9880 | 9 9787- | 30 |
| 2 | 9 9995- | 9 9872 | 9 9783 | 28 |
| 4 | 9 9987 | 9 9865 | 9 9779 | 26 |
| 6 | 9 9978- | 9 9858 | 9 9775 | 24 |
| 8 | 9 9969 | 9 9851 | 9 9772 | 22 |
| 10 | 9 9961 | 9 9844 | 9 9769 | 20 |
| 12 | 9 9952- | 9 9837 | 9 9766 | 18 |
| 14 | 9 9944 | 9 9830 | 9 9763 | 16 |
| 16 | 9 9936 | 9 9824 | 9 9760- | 14 |
| 18 | 9 9928 | 9 9818 | 9 9758- | 12 |
| 20 | 9 9920 | 9 9812 | 9 9757 | 10 |
| 22 | 9 9912 | 9 9807 | 9 9755- | 8 |
| 24 | 9 9904 | 9 9802 | 9 9754 | 6 |
| 26 | 9 9896 | 9 9797 | 9 9753 | 4 |
| 28 | 9 9888 | 9 0792 | 9 9753 | 2 |
| 30 | 9 9880 | 9 9787- | 9 9753 | 0 |
| | Sig. VIII. | Sig. VII. | Sig. VI. | *Gr.* |

## Solis a Nodo medio distantia.

| Sig. O. VI. | | | | | | | Sig. I. VII. | | | | | | | Sig. II VIII. | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Æquat. Nodi Adde. | | | Inclinat. Sinus Logarithmicus. | Reduct. Maxi. | | Æquat. Nodi Adde. | | | Inclinat Sinus Logarithmicus. | Reduct. Maxi. | | | Æquat. Nodi Adde. | | | Inclinat Sinus Logarithmicus. | Reduct. Maxi. | | |
| Gr. | ° | ′ | ″ | | ′ | ″ | ° | ′ | ″ | | ′ | ″ | | ° | ′ | ″ | | ′ | ″ | |
| 0 | 0 | 0 | 0 | 8 96462 | 7 | 20 | 1 | 16 | 42 | 8 95853 | 7 | 8 | 1 | 18 | 44 | 8 94605 | 6 | 44 | 30 |
| 1 | 0 | 3 | 38 | 8 96461 | | | 1 | 18 | 16 | 8 95816 | 7 | 7 | 1 | 17 | 13 | 8 94567 | 6 | 43 | 29 |
| 2 | 0 | 6 | 6 | 8 96459 | | | 1 | 19 | 44 | 8 95777 | | | 1 | 15 | 29 | 8 94531 | | | 28 |
| 3 | 0 | 9 | 9 | 8 96456 | | | 1 | 21 | 6 | 8 95737 | 7 | 6 | 1 | 13 | 43 | 8 94495 | 6 | 42 | 27 |
| 4 | 0 | 12 | 10 | 8 96451 | | | 1 | 22 | 23 | 8 95698 | 7 | 5 | 1 | 11 | 53 | 8 94459 | | | 26 |
| 5 | 0 | 15 | 12 | 8 96444 | | | 1 | 23 | 34 | 8 95658 | 7 | 4 | 1 | 9 | 55 | 8 94425 | 6 | 41 | 25 |
| 6 | 0 | 18 | 12 | 8 96436 | | | 1 | 24 | 39 | 8 95617 | 7 | 3 | 1 | 7 | 52 | 8 94391 | | | 24 |
| 7 | 0 | 21 | 10 | 8 96426 | | | 1 | 25 | 38 | 8 95576 | 7 | 2 | 1 | 5 | 44 | 8 94359 | 6 | 40 | 23 |
| 8 | 0 | 24 | 8 | 8 96415 | 7 | 19 | 1 | 26 | 31 | 8 95534 | 7 | 1 | 1 | 3 | 32 | 8 94328 | | | 22 |
| 9 | 0 | 27 | 4 | 8 96403 | | | 1 | 27 | 17 | 8 95492 | 7 | 0 | 1 | 1 | 14 | 8 94298 | 6 | 39 | 21 |
| 10 | 0 | 29 | 57 | 8 96390 | | | 1 | 27 | 58 | 8 95450 | | | 0 | 58 | 51 | 8 94269 | 6 | 38 | 20 |
| 11 | 0 | 32 | 49 | 8 96375 | | | 1 | 28 | 32 | 8 95407 | 6 | 59 | 0 | 56 | 24 | 8 94241 | 6 | 37 | 19 |
| 12 | 0 | 35 | 39 | 8 96358 | 7 | 18 | 1 | 28 | 59 | 8 95363 | 6 | 58 | 0 | 53 | 53 | 8 94214 | | | 18 |
| 13 | 0 | 38 | 26 | 8 96340 | | | 1 | 29 | 21 | 8 95320 | 6 | 57 | 0 | 51 | 17 | 8 94188 | 6 | 36 | 17 |
| 14 | 0 | 41 | 11 | 8 96321 | 7 | 17 | 1 | 29 | 35 | 8 95277 | | | 0 | 48 | 38 | 8 94164 | | | 16 |
| 15 | 0 | 43 | 53 | 8 96300 | | | 1 | 29 | 43 | 8 95234 | 6 | 56 | 0 | 45 | 54 | 8 94141 | 6 | 35 | 15 |
| 16 | 0 | 46 | 31 | 8 96278 | | | 1 | 29 | 45 | 8 95190 | 6 | 55 | 0 | 43 | 7 | 8 94119 | | | 14 |
| 17 | 0 | 49 | 7 | 8 96255 | 7 | 16 | 1 | 29 | 40 | 8 95147 | 6 | 54 | 0 | 40 | 17 | 8 94099 | | | 13 |
| 18 | 0 | 51 | 39 | 8 96231 | | | 1 | 29 | 28 | 8 95104 | 6 | 53 | 0 | 37 | 24 | 8 94080 | 6 | 34 | 12 |
| 19 | 0 | 54 | 8 | 8 96205 | 7 | 15 | 1 | 29 | 10 | 8 95060 | | | 0 | 34 | 27 | 8 94062 | | | 11 |
| 20 | 0 | 56 | 33 | 8 96178 | | | 1 | 28 | 46 | 8 95017 | 6 | 52 | 0 | 31 | 28 | 8 94046 | | | 10 |
| 21 | 0 | 58 | 54 | 8 96150 | 7 | 14 | 1 | 28 | 14 | 8 94974 | 6 | 51 | 0 | 28 | 26 | 8 94032 | | | 9 |
| 22 | 1 | 1 | 11 | 8 96121 | | | 1 | 27 | 37 | 8 94931 | 6 | 50 | 0 | 25 | 22 | 8 94019 | 6 | 33 | 8 |
| 23 | 1 | 3 | 24 | 8 96091 | 7 | 13 | 1 | 26 | 52 | 8 94889 | 6 | 49 | 0 | 22 | 16 | 8 94008 | | | 7 |
| 24 | 1 | 5 | 32 | 8 96060 | 7 | 12 | 1 | 26 | 1 | 8 94847 | 6 | 48 | 0 | 19 | 9 | 8 93997 | | | 6 |
| 25 | 1 | 7 | 36 | 8 96028 | | | 1 | 25 | 4 | 8 94806 | | | 0 | 16 | 0 | 8 93988 | | | 5 |
| 26 | 1 | 9 | 35 | 8 95995 | 7 | 11 | 1 | 24 | 1 | 8 94764 | 6 | 47 | 0 | 12 | 49 | 8 93981 | | | 4 |
| 27 | 1 | 11 | 30 | 8 95960 | 7 | 10 | 1 | 22 | 51 | 8 94724 | 6 | 46 | 0 | 9 | 38 | 8 93976 | | | 3 |
| 28 | 1 | 13 | 19 | 8 95925 | | | 1 | 21 | 35 | 8 94684 | | | 0 | 6 | 26 | 8 93972 | | | 2 |
| 29 | 1 | 15 | 03 | 8 95889 | 7 | 9 | 1 | 20 | 12 | 8 94645 | 6 | 45 | 0 | 3 | 13 | 8 93970 | | | 1 |
| 30 | 1 | 16 | 42 | 8 95853 | 7 | 8 | 1 | 18 | 44 | 8 94605 | 6 | 44 | 0 | 0 | 0 | 8 93970 | 6 | 32 | 0 |
| | Subtrahe. | | | | | | Subtrahe. | | | | | | | Subtrahe. | | | | | | Gr. |
| | Sig. V. XI. | | | | | | Sig IV. X. | | | | | | | Sig. III. IX. | | | | | | |

# TABULA PARALLAXIUM LUNÆ HORIZONTALIUM IN SYZYGIIS.

| Anom. Lunæ vera. | Eccentricitas Lunæ. ,065 Parallaxis Lunæ Horiz. | | ,055 | | ,045 | |
|---|---|---|---|---|---|---|
| S ° | ′ | ″ | ′ | ″ | ′ | ″ |
| 0 0 | 53 | 34 | 54 | 4 | 54 | 35 |
| 0 3 | 53 | 34 | 54 | 4 | 54 | 35 |
| 0 6 | 53 | 35 | 54 | 5 | 54 | 35 |
| 0 9 | 53 | 36 | 54 | 6 | 54 | 36 |
| 0 12 | 53 | 38 | 54 | 8 | 54 | 38 |
| 0 15 | 53 | 41 | 54 | 10 | 54 | 40 |
| 0 18 | 53 | 44 | 54 | 13 | 54 | 42 |
| 0 21 | 53 | 48 | 54 | 16 | 54 | 45 |
| 0 24 | 53 | 52 | 54 | 20 | 54 | 48 |
| 0 27 | 53 | 57 | 54 | 24 | 54 | 51 |
| 1 0 | 54 | 3 | 54 | 29 | 54 | 55 |
| 1 3 | 54 | 9 | 54 | 34 | 54 | 59 |
| 1 6 | 54 | 16 | 54 | 40 | 55 | 4 |
| 1 9 | 54 | 23 | 54 | 46 | 55 | 9 |
| 1 12 | 54 | 30 | 54 | 52 | 55 | 14 |
| 1 15 | 54 | 38 | 54 | 59 | 55 | 20 |
| 1 18 | 54 | 47 | 55 | 6 | 55 | 26 |
| 1 21 | 54 | 56 | 55 | 13 | 55 | 32 |
| 1 24 | 55 | 5 | 55 | 21 | 55 | 38 |
| 1 27 | 55 | 15 | 55 | 30 | 55 | 45 |
| 2 0 | 55 | 25 | 55 | 38 | 55 | 52 |
| 2 3 | 55 | 35 | 55 | 47 | 55 | 59 |
| 2 6 | 55 | 46 | 55 | 56 | 56 | 6 |
| 2 9 | 55 | 56 | 56 | 5 | 56 | 14 |
| 2 12 | 56 | 7 | 56 | 14 | 56 | 21 |
| 2 15 | 56 | 19 | 56 | 23 | 56 | 29 |
| 2 18 | 56 | 30 | 56 | 33 | 56 | 37 |
| 2 21 | 56 | 41 | 56 | 43 | 56 | 45 |
| 2 24 | 56 | 53 | 56 | 53 | 56 | 53 |
| 2 27 | 57 | 5 | 57 | 3 | 57 | 1 |
| 3 0 | 57 | 16 | 57 | 12 | 57 | 9 |

| Anom. Lunæ vera. | Eccentricitas Lunæ. ,065 Parallaxis Lunæ Horiz. | | ,055 | | ,045 | |
|---|---|---|---|---|---|---|
| S ° | ′ | ″ | ′ | ″ | ′ | ″ |
| 3 0 | 57 | 16 | 57 | 12 | 57 | 9 |
| 3 3 | 57 | 28 | 57 | 22 | 57 | 17 |
| 3 6 | 57 | 40 | 57 | 32 | 57 | 25 |
| 3 9 | 57 | 51 | 57 | 42 | 57 | 33 |
| 3 12 | 58 | 3 | 57 | 52 | 57 | 41 |
| 3 15 | 58 | 14 | 58 | 1 | 57 | 49 |
| 3 18 | 58 | 25 | 58 | 11 | 57 | 57 |
| 3 21 | 58 | 36 | 58 | 20 | 58 | 4 |
| 3 24 | 58 | 47 | 58 | 29 | 58 | 12 |
| 3 27 | 58 | 58 | 58 | 38 | 58 | 19 |
| 4 0 | 59 | 8 | 58 | 47 | 58 | 26 |
| 4 3 | 59 | 18 | 58 | 55 | 58 | 33 |
| 4 6 | 59 | 28 | 59 | 3 | 58 | 40 |
| 4 9 | 59 | 37 | 59 | 11 | 58 | 46 |
| 4 12 | 59 | 46 | 59 | 19 | 58 | 52 |
| 4 15 | 59 | 54 | 59 | 26 | 58 | 58 |
| 4 18 | 60 | 2 | 59 | 33 | 59 | 3 |
| 4 21 | 60 | 10 | 59 | 39 | 59 | 9 |
| 4 24 | 60 | 17 | 59 | 45 | 59 | 14 |
| 4 27 | 60 | 24 | 59 | 51 | 59 | 18 |
| 5 0 | 60 | 30 | 59 | 56 | 59 | 23 |
| 5 3 | 60 | 35 | 60 | 1 | 59 | 26 |
| 5 6 | 60 | 40 | 60 | 5 | 59 | 30 |
| 5 9 | 60 | 45 | 60 | 9 | 59 | 33 |
| 5 12 | 60 | 49 | 60 | 12 | 59 | 36 |
| 5 15 | 60 | 52 | 60 | 15 | 59 | 38 |
| 5 18 | 60 | 55 | 60 | 17 | 59 | 40 |
| 5 21 | 60 | 57 | 60 | 19 | 59 | 41 |
| 5 24 | 60 | 59 | 60 | 20 | 59 | 42 |
| 5 27 | 61 | 0 | 60 | 21 | 59 | 43 |
| 6 0 | 61 | 0 | 60 | 21 | 59 | 43 |

## Logarithmi pro Parallaxi extra Syzygias.

| Lunæ à Sole vel Oppositio distan. | | Logarithmi Logist. addendi. |
|---|---|---|
| S | ° | Log. |
| 0 | 0 | 0 0 |
| 0 | 3 | 0, 2 |
| 0 | 6 | 0, 7 |
| 0 | 9 | 1, 5 |
| 0 | 12 | 2, 7 |
| 0 | 15 | 4, 2 |
| 0 | 18 | 6, 0 |
| 0 | 21 | 8, 1 |
| 0 | 24 | 10, 4 |
| 0 | 27 | 13, 0 |
| 1 | 0 | 15, 7 |
| 1 | 3 | 18, 6 |
| 1 | 6 | 21, 7 |
| 1 | 9 | 24, 7 |
| 1 | 12 | 28, 1 |
| 1 | 15 | 31, 4 |
| 1 | 18 | 34, 6 |
| 1 | 21 | 37, 8 |
| 1 | 24 | 41, 0 |
| 1 | 27 | 44, 1 |
| 2 | 0 | 47, 0 |
| 2 | 3 | 49, 7 |
| 2 | 6 | 52, 2 |
| 2 | 9 | 54, 5 |
| 2 | 12 | 56, 6 |
| 2 | 15 | 58, 3 |
| 2 | 18 | 59, 8 |
| 2 | 21 | 61, 0 |
| 2 | 24 | 61, 8 |
| 2 | 27 | 62, 3 |
| 3 | 0 | 62, 5 |

# TABULA MOTUUM HORARIORUM, DIAMETRORUM ET PARALAXIUM SOLIS ET LUNÆ, IN ECLIPSIBUS.

| Anom. med. Solis. | ☉ Mot. H. ver. | Diam. Solis. | Anom. med. Solis. | Argum. Ann. | ☽ Mot. Hor. ver. | ☽ Diam. Horiz. | ☽ Paral. Horiz. | Argum. Ann. | Dist. ☉ & ☽ à vert. | Paral. ☽ ☉ | Aug. Lunæ Apog. | Diam Lunæ Perig. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ° ′ | ′ ″ | ′ ″ | ° ′ | ° ′ | ′ ″ | ′ ″ | ′ ″ | ° ′ | Gr. | ″ | ″ | ″ |
| O 0 | 2 23 | 31 38 | 0XII | O. 0 | 29 33 | 29 25 | 53 28 | 0XII | 0 | 0 | 29 | 36 |
| 5 | 2 23 | 31 38 | 25 | 5 | 29 34 | 29 25 | 53 29 | 25 | 3 | 1 | 28 | 36 |
| 10 | 2 23 | 31 38 | 20 | 10 | 29 36 | 29 26 | 53 31 | 20 | 6 | 1 | 28 | 36 |
| 15 | 2 23 | 31 39 | 15 | 15 | 29 39 | 29 28 | 53 35 | 15 | 9 | 2 | 28 | 36 |
| 20 | 2 23 | 31 40 | 10 | 20 | 29 45 | 29 30 | 53 41 | 10 | 12 | 3 | 27 | 35 |
| 25 | 2 23 | 31 41 | 5 | 25 | 29 53 | 29 34 | 53 48 | 5 | 15 | 3 | 27 | 35 |
| I. 0 | 2 24 | 31 42 | 0XI | I. 0 | 30 1 | 29 40 | 53 57 | 0XI. | 18 | 4 | 27 | 34 |
| 5 | 2 24 | 31 43 | 25 | 5 | 30 11 | 29 46 | 54 7 | 25 | 21 | 4 | 26 | 34 |
| 10 | 2 24 | 31 45 | 20 | 10 | 30 22 | 29 51 | 54 18 | 20 | 24 | 5 | 26 | 33 |
| 15 | 2 24 | 31 47 | 15 | 15 | 30 36 | 29 58 | 54 32 | 15 | 27 | 6 | 25 | 32 |
| 20 | 2 25 | 31 49 | 10 | 20 | 30 50 | 30 5 | 54 45 | 10 | 30 | 6 | 24 | 31 |
| 25 | 2 25 | 31 51 | 5 | 25 | 31 6 | 30 14 | 55 0 | 5 | 33 | 7 | 23 | 30 |
| II. 0 | 2 25 | 31 53 | 0X. | II. 0 | 31 23 | 30 23 | 55 16 | 0X. | 36 | 7 | 23 | 29 |
| 5 | 2 26 | 31 56 | 25 | 5 | 31 42 | 30 32 | 55 33 | 25 | 39 | 8 | 22 | 28 |
| 10 | 2 26 | 31 59 | 20 | 10 | 32 1 | 30 42 | 55 51 | 20 | 42 | 8 | 21 | 27 |
| 15 | 2 26 | 32 1 | 15 | 15 | 32 23 | 30 52 | 56 10 | 15 | 45 | 9 | 20 | 25 |
| 20 | 2 27 | 32 4 | 10 | 20 | 32 45 | 31 3 | 56 30 | 10 | 48 | 9 | 19 | 24 |
| 25 | 2 27 | 32 7 | 5 | 25 | 33 8 | 31 14 | 56 49 | 5 | 51 | 9 | 18 | 23 |
| III. 0 | 2 28 | 32 10 | 0IX | III. 0 | 33 32 | 31 25 | 57 9 | 0IX | 54 | 10 | 16 | 21 |
| 5 | 2 28 | 32 13 | 25 | 5 | 33 56 | 31 36 | 57 29 | 25 | 56 | 10 | 16 | 20 |
| 10 | 2 28 | 32 15 | 20 | 10 | 34 21 | 31 47 | 57 49 | 20 | 58 | 10 | 15 | 19 |
| 15 | 2 29 | 32 18 | 15 | 15 | 34 45 | 31 58 | 58 9 | 15 | 60 | 10 | 14 | 18 |
| 20 | 2 29 | 32 21 | 10 | 20 | 35 8 | 32 9 | 58 28 | 10 | 62 | 11 | 13 | 17 |
| 25 | 2 30 | 32 23 | 5 | 25 | 35 31 | 32 20 | 58 47 | 5 | 64 | 11 | 12 | 16 |
| IV. 0 | 2 30 | 32 26 | 0VIII | IV. 0 | 35 54 | 32 30 | 59 5 | 0VIII | 66 | 11 | 11 | 15 |
| 5 | 2 31 | 32 29 | 25 | 5 | 36 14 | 32 39 | 59 23 | 25 | 68 | 11 | 10 | 13 |
| 10 | 2 31 | 32 31 | 20 | 10 | 36 34 | 32 48 | 59 40 | 20 | 70 | 11 | 10 | 12 |
| 15 | 2 31 | 32 33 | 15 | 15 | 36 53 | 32 57 | 59 55 | 15 | 72 | 11 | 9 | 11 |
| 20 | 2 32 | 32 35 | 10 | 20 | 37 10 | 33 5 | 60 10 | 10 | 74 | 12 | 8 | 10 |
| 25 | 2 32 | 32 37 | 5 | 25 | 37 24 | 33 12 | 60 23 | 5 | 76 | 12 | 7 | 9 |
| V. 0 | 2 32 | 32 39 | 0VII | V. 0 | 37 39 | 33 18 | 60 34 | 0VII | 78 | 12 | 6 | 7 |
| 5 | 2 32 | 32 40 | 25 | 5 | 37 50 | 33 24 | 60 44 | 25 | 80 | 12 | 5 | 6 |
| 10 | 2 33 | 32 41 | 20 | 10 | 38 0 | 33 28 | 60 52 | 20 | 82 | 12 | 4 | 5 |
| 15 | 2 33 | 32 42 | 15 | 15 | 38 6 | 33 31 | 60 58 | 15 | 84 | 12 | 3 | 4 |
| 20 | 2 33 | 32 43 | 10 | 20 | 38 14 | 33 34 | 61 3 | 10 | 86 | 12 | 2 | 2 |
| 25 | 2 33 | 32 43 | 5 | 25 | 38 17 | 33 36 | 61 6 | 5 | 88 | 12 | 1 | 1 |
| VI. 0 | 2 33 | 32 43 | 0VI | VI. 0 | 38 18 | 33 36 | 61 7 | 0VI. | 90 | 12 | 0 | 0 |

*In Oppositionibus addantur*
VI *Signa Argumento Annuo.*

# TABULA REFRACTIONUM SECUNDUM DISTANTIAS à VERTICE.

| Dist. App. à Vertice | Refractio. | | Dist. App. à Vertice | Refractio. | | Dist. App. à Vertice | Refractio. | |
|---|---|---|---|---|---|---|---|---|
| Gr. | ′ | ″ | Gr. | ′ | ″ | Gr. m. | ′ | ″ |
| 0 | 0 | 0 | 35 | 0 | 38 | 70 0 | 2 | 26 |
| 1 | 0 | 1 | 36 | 0 | 39 | 71 0 | 2 | 34 |
| 2 | 0 | 2 | 37 | 0 | 40 | 72 0 | 2 | 43 |
| 3 | 0 | 3 | 38 | 0 | 42 | 73 0 | 2 | 53 |
| 4 | 0 | 4 | 39 | 0 | 44 | 74 0 | 3 | 4 |
| 5 | 0 | 5 | 40 | 0 | 45 | 75 0 | 3 | 17 |
| 6 | 0 | 6 | 41 | 0 | 47 | 76 0 | 3 | 31 |
| 7 | 0 | 7 | 42 | 0 | 48 | 77 0 | 3 | 47 |
| 8 | 0 | 8 | 43 | 0 | 50 | 78 0 | 4 | 5 |
| 9 | 0 | 9 | 44 | 0 | 52 | 79 0 | 4 | 27 |
| 10 | 0 | 10 | 45 | 0 | 54 | 80 0 | 4 | 52 |
| 11 | 0 | 11 | 46 | 0 | 56 | 80 30 | 5 | 6 |
| 12 | 0 | 12 | 47 | 0 | 58 | 81 0 | 5 | 22 |
| 13 | 0 | 13 | 48 | 1 | 0 | 81 30 | 5 | 40 |
| 14 | 0 | 14 | 49 | 1 | 2 | 82 0 | 6 | 0 |
| 15 | 0 | 15 | 50 | 1 | 4 | 82 30 | 6 | 22 |
| 16 | 0 | 16 | 51 | 1 | 6 | 83 0 | 6 | 47 |
| 17 | 0 | 17 | 52 | 1 | 8 | 83 30 | 7 | 14 |
| 18 | 0 | 18 | 53 | 1 | 11 | 84 0 | 7 | 45 |
| 19 | 0 | 19 | 54 | 1 | 13 | 84 30 | 8 | 21 |
| 20 | 0 | 20 | 55 | 1 | 16 | 85 0 | 9 | 2 |
| 21 | 0 | 21 | 56 | 1 | 19 | 85 30 | 9 | 50 |
| 22 | 0 | 22 | 57 | 1 | 22 | 86 0 | 10 | 48 |
| 23 | 0 | 23 | 58 | 1 | 25 | 86 30 | 11 | 57 |
| 24 | 0 | 24 | 59 | 1 | 28 | 87 0 | 13 | 20 |
| 25 | 0 | 25 | 60 | 1 | 32 | 87 30 | 15 | 2 |
| 26 | 0 | 26 | 61 | 1 | 36 | 88 0 | 17 | 8 |
| 27 | 0 | 27 | 62 | 1 | 40 | 88 15 | 18 | 22 |
| 28 | 0 | 28 | 63 | 1 | 44 | 88 30 | 19 | 46 |
| 29 | 0 | 30 | 64 | 1 | 49 | 88 45 | 21 | 20 |
| 30 | 0 | 31 | 65 | 1 | 54 | 89 0 | 23 | 7 |
| 31 | 0 | 32 | 66 | 1 | 59 | 89 15 | 25 | 11 |
| 32 | 0 | 34 | 67 | 2 | 5 | 89 30 | 27 | 35 |
| 33 | 0 | 35 | 68 | 2 | 11 | 89 45 | 30 | 24 |
| 34 | 0 | 36 | 69 | 2 | 18 | 90 0 | 33 | 45 |

## TABULA ÆQUATIONUM LUNÆ IN SYZYGIIS.

*Argumentum Annuum.*

| *Sol ab Apog. Lunæ* Gr. | Sig. o. *Subtr.* ° ′ ″ | Sig. I. *Subtr.* ° ′ ″ | Sig. II. *Subtr.* ° ′ ″ | Sig. III. *Subtr.* ° ′ ″ | Sig. IV. *Subtr.* ° ′ ″ | Sig. V. *Subtr.* ° ′ ″ | |
|---|---|---|---|---|---|---|---|
| 0 | 0 0 0 | 2 38 53 | 4 27 45 | 4 57 46 | 4 8 20 | 2 19 27 | 30 |
| 1 | 0 5 36 | 2 43 33 | 4 30 6 | 4 57 20 | 4 5 31 | 2 15 7 | 29 |
| 2 | 0 11 12 | 2 48 9 | 4 32 21 | 4 56 49 | 4 2 38 | 2 10 45 | 28 |
| 3 | 0 16 47 | 2 52 42 | 4 34 31 | 4 56 12 | 3 59 41 | 2 6 22 | 27 |
| 4 | 0 22 23 | 2 57 11 | 4 36 35 | 4 55 29 | 3 56 39 | 2 1 57 | 26 |
| 5 | 0 27 58 | 3 1 37 | 4 38 34 | 4 54 42 | 3 53 35 | 1 57 31 | 25 |
| 6 | 0 33 33 | 3 5 59 | 4 40 27 | 4 53 50 | 3 50 28 | 1 53 2 | 24 |
| 7 | 0 39 6 | 3 10 16 | 4 42 15 | 4 52 52 | 3 47 16 | 1 48 31 | 23 |
| 8 | 0 44 38 | 3 14 30 | 4 43 58 | 4 51 48 | 3 44 1 | 1 43 59 | 22 |
| 9 | 0 50 9 | 3 18 40 | 4 45 35 | 4 50 40 | 3 40 42 | 1 39 26 | 21 |
| 10 | 0 55 40 | 3 22 45 | 4 47 5 | 4 49 26 | 3 37 18 | 1 34 52 | 20 |
| 11 | 1 1 9 | 3 26 45 | 4 48 30 | 4 48 7 | 3 33 52 | 1 30 16 | 19 |
| 12 | 1 6 37 | 3 30 41 | 4 49 50 | 4 46 44 | 3 30 22 | 1 25 38 | 18 |
| 13 | 1 12 4 | 3 34 33 | 4 51 5 | 4 45 16 | 3 26 49 | 1 20 58 | 17 |
| 14 | 1 17 30 | 3 38 20 | 4 52 13 | 4 43 42 | 3 23 14 | 1 16 18 | 16 |
| 15 | 1 22 53 | 3 42 2 | 4 53 15 | 4 42 4 | 3 19 36 | 1 11 37 | 15 |
| 16 | 1 28 13 | 3 45 40 | 4 54 13 | 4 40 21 | 3 15 54 | 1 6 55 | 14 |
| 17 | 1 33 31 | 3 49 14 | 4 55 5 | 4 38 33 | 3 12 10 | 1 2 13 | 13 |
| 18 | 1 38 48 | 3 52 43 | 4 55 51 | 4 36 41 | 3 8 22 | 0 57 30 | 12 |
| 19 | 1 44 3 | 3 56 6 | 4 56 32 | 4 34 44 | 3 4 31 | 0 52 45 | 11 |
| 20 | 1 49 16 | 3 59 24 | 4 57 7 | 4 32 42 | 3 0 38 | 0 48 0 | 10 |
| 21 | 1 54 27 | 4 2 37 | 4 57 36 | 4 30 35 | 2 56 42 | 0 43 14 | 9 |
| 22 | 1 59 36 | 4 5 46 | 4 57 59 | 4 28 24 | 2 52 44 | 0 38 28 | 8 |
| 23 | 2 4 41 | 4 8 49 | 4 58 16 | 4 26 9 | 2 48 43 | 0 33 41 | 7 |
| 24 | 2 9 43 | 4 11 47 | 4 58 29 | 4 23 50 | 2 44 39 | 0 28 52 | 6 |
| 25 | 2 14 43 | 4 14 40 | 4 58 35 | 4 21 25 | 2 40 32 | 0 24 4 | 5 |
| 26 | 2 19 41 | 4 17 27 | 4 58 36 | 4 18 56 | 2 36 24 | 0 19 16 | 4 |
| 27 | 2 24 35 | 4 20 8 | 4 58 31 | 4 16 23 | 2 32 14 | 0 14 27 | 3 |
| 28 | 2 29 24 | 4 22 46 | 4 58 22 | 4 13 46 | 2 28 1 | 0 9 38 | 2 |
| 29 | 2 34 10 | 4 25 19 | 4 58 7 | 4 11 5 | 2 23 45 | 0 4 49 | 1 |
| 30 | 2 38 53 | 4 27 45 | 4 57 46 | 4 8 20 | 2 19 27 | 0 0 0 | 0 |
| | Sig. XI. *Adde.* | Sig. X. *Adde.* | Sig. IX. *Adde.* | Sig. VIII. *Adde.* | Sig. VII. *Adde.* | Sig. VI. *Adde.* | *Gr.* |

# TABULA LATITUDINARIA LUNÆ IN SYZYGIIS.

## Solis a Nodo medio distantia.

| Argument. Latitudinis. Gr. | Sig. 0. Bor. Sig. 6. Aust. Latitudo. ° ′ ″ | Subtr. Subtr. Reduct. ′ ″ | Inclinatio viæ Lunæ ad Eclipticam. ° ′ ″ | Sig. 1. Bor. Sig. 7. Aust. Latitudo. ° ′ ″ | Subtr. Subtr. Reduct. ′ ″ | Sig. 2. Bor. Sig. 8. Aust. Latitudo. ° ′ ″ | Subtr. Subtr. Reduct. ′ ″ | |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 0 0 | 0 0 | 5 17 20 | 2 30 12 | 6 1 | 4 19 39 | 5 59 | 30 |
| 1 | 0 5 15 | 0 14 | 5 17 17 | 2 34 42 | 6 8 | 4 22 13 | 5 51 | 29 |
| 2 | 0 10 30 | 0 29 | 5 17 8 | 2 39 9 | 6 14 | 4 24 42 | 5 43 | 28 |
| 3 | 0 15 44 | 0 43 | 5 16 54 | 2 43 34 | 6 20 | 4 27 6 | 5 35 | 27 |
| 4 | 0 20 59 | 0 58 | 5 16 33 | 2 47 56 | 6 26 | 4 29 25 | 5 26 | 26 |
| 5 | 0 26 13 | 1 12 | 5 16 6 | 2 52 15 | 6 31 | 4 31 40 | 5 17 | 25 |
| 6 | 0 31 26 | 1 26 | 5 15 33 | 2 56 30 | 6 36 | 4 33 49 | 5 8 | 24 |
| 7 | 0 36 39 | 1 41 | 5 14 55 | 3 0 42 | 6 40 | 4 35 53 | 4 58 | 23 |
| 8 | 0 41 51 | 1 55 | 5 14 11 | 3 4 51 | 6 43 | 4 37 52 | 4 48 | 22 |
| 9 | 0 47 2 | 2 9 | 5 13 22 | 3 8 56 | 6 46 | 4 39 47 | 4 37 | 21 |
| 10 | 0 52 13 | 2 22 | 5 12 27 | 3 12 58 | 6 49 | 4 41 37 | 4 26 | 20 |
| 11 | 0 57 23 | 2 36 | 5 11 26 | 3 16 56 | 6 52 | 4 43 21 | 4 15 | 19 |
| 12 | 1 2 31 | 2 49 | 5 10 19 | 3 20 51 | 6 54 | 4 45 0 | 4 3 | 18 |
| 13 | 1 7 38 | 3 3 | 5 9 6 | 3 24 42 | 6 55 | 4 46 34 | 3 51 | 17 |
| 14 | 1 12 44 | 3 16 | 5 7 47 | 3 28 29 | 6 56 | 4 48 3 | 3 39 | 16 |
| 15 | 1 17 49 | 3 29 | 5 6 22 | 3 32 12 | 6 56 | 4 49 26 | 3 27 | 15 |
| 16 | 1 22 52 | 3 41 | 5 4 52 | 3 35 51 | 6 55 | 4 50 44 | 3 14 | 14 |
| 17 | 1 27 54 | 3 53 | 5 3 16 | 3 39 26 | 6 54 | 4 51 57 | 3 1 | 13 |
| 18 | 1 32 54 | 4 5 | 5 1 35 | 3 42 57 | 6 53 | 4 53 4 | 2 48 | 12 |
| 19 | 1 37 52 | 4 17 | 4 59 49 | 3 46 24 | 6 51 | 4 54 6 | 2 35 | 11 |
| 20 | 1 42 49 | 4 28 | 4 57 56 | 3 49 48 | 6 49 | 4 55 3 | 2 21 | 10 |
| 21 | 1 47 44 | 4 39 | 4 55 58 | 3 53 7 | 6 46 | 4 55 55 | 2 8 | 9 |
| 22 | 1 52 37 | 4 50 | 4 53 55 | 3 56 22 | 6 43 | 4 56 42 | 1 54 | 8 |
| 23 | 1 57 27 | 5 0 | 4 51 47 | 3 59 33 | 6 39 | 4 57 23 | 1 40 | 7 |
| 24 | 2 2 15 | 5 10 | 4 49 33 | 4 2 39 | 6 35 | 4 57 58 | 1 26 | 6 |
| 25 | 2 7 00 | 5 20 | 4 47 14 | 4 5 40 | 6 30 | 4 58 27 | 1 12 | 5 |
| 26 | 2 11 43 | 5 29 | 4 44 50 | 4 8 36 | 6 25 | 4 58 51 | 0 58 | 4 |
| 27 | 2 16 24 | 5 38 | 4 42 20 | 4 11 28 | 6 19 | 4 59 10 | 0 43 | 3 |
| 28 | 2 21 2 | 5 46 | 4 39 45 | 4 14 16 | 6 13 | 4 59 24 | 0 29 | 2 |
| 29 | 2 25 38 | 5 54 | 4 37 5 | 4 17 0 | 6 6 | 4 59 32 | 0 14 | 1 |
| 30 | 2 30 12 | 6 1 | 4 34 19 | 4 19 39 | 5 59 | 4 59 35 | 0 0 | 0 |
| | Sig. 11. Aust. Sig. 5. Bor. | Adde. Adde. | | Sig. 10. Aust. Sig. 4. Bor. | Adde. Adde. | Sig 9. Aust Sig. 3. Bor. | Adde. Adde | Gr. |

# TABULA MOTUUM HORARIORUM, DIAMETRORUM ET PARALLAXIUM SOLIS ET LUNÆ, IN ECLIPSIBUS

| Anom. med. Solis. | Hor. ☉ ver. | Diam. Solis. | Anom. med. Solis. | Argum. Ann. | ☽ Mot. Hor. Ver. | ☽ Diam. Horiz. | ☽ Parall. Horiz. | Argum. Ann. | Alt. ☉ ♂ ☽. | Paral. lax. ☉. | Aug. Diam Lunæ Apog | Perig. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S ○ | ′ ″ | ′ ″ | ○ S | S ○ | ′ ″ | ′ ″ | ′ ″ | ○ S | ○ | ″ | ″ | ″ |
| O. 0 | 2 23 | 31 38 | oXII. | O. 0 | 29 33 | 29 25 | 53 28 | oXII. | 0 | 12 | 0 | 0 |
| 5 | 2 23 | 31 38 | 25 | 5 | 29 34 | 29 25 | 53 29 | 25 | 2 | 12 | 1 | 1 |
| 10 | 2 23 | 31 38 | 20 | 10 | 29 36 | 29 26 | 53 31 | 20 | 4 | 12 | 2 | 2 |
| 15 | 2 23 | 31 39 | 15 | 15 | 29 39 | 29 28 | 53 35 | 15 | 6 | 12 | 3 | 4 |
| 20 | 2 23 | 31 40 | 10 | 20 | 29 45 | 29 30 | 53 41 | 10 | 8 | 12 | 4 | 5 |
| 25 | 2 23 | 31 41 | 5 | 25 | 29 53 | 29 34 | 53 48 | 5 | 10 | 12 | 5 | 6 |
| I. 0 | 2 24 | 31 42 | oXI. | I. 0 | 30 1 | 29 40 | 53 57 | oXI. | 12 | 12 | 6 | 7 |
| 5 | 2 24 | 31 43 | 25 | 5 | 30 11 | 29 46 | 54 7 | 25 | 14 | 12 | 7 | 9 |
| 10 | 2 24 | 31 45 | 20 | 10 | 30 22 | 29 51 | 54 18 | 20 | 16 | 12 | 8 | 10 |
| 15 | 2 24 | 31 47 | 15 | 15 | 30 36 | 29 58 | 54 32 | 15 | 18 | 12 | 9 | 11 |
| 20 | 2 25 | 31 49 | 10 | 20 | 30 50 | 30 5 | 54 45 | 10 | 20 | 12 | 10 | 12 |
| 25 | 2 25 | 31 51 | 5 | 25 | 31 6 | 30 14 | 55 0 | 5 | 22 | 12 | 10 | 13 |
| II. 0 | 2 25 | 31 53 | oX. | II. 0 | 31 23 | 30 23 | 55 16 | oX. | 24 | 11 | 11 | 15 |
| 5 | 2 26 | 31 56 | 25 | 5 | 31 42 | 30 32 | 55 33 | 25 | 26 | 11 | 12 | 16 |
| 10 | 2 26 | 31 59 | 20 | 10 | 32 1 | 30 42 | 55 51 | 20 | 28 | 11 | 13 | 17 |
| 15 | 2 26 | 32 1 | 15 | 15 | 32 23 | 30 52 | 56 10 | 15 | 30 | 11 | 14 | 18 |
| 20 | 2 27 | 32 4 | 10 | 20 | 32 45 | 31 3 | 56 30 | 10 | 32 | 10 | 15 | 19 |
| 25 | 2 27 | 32 7 | 5 | 25 | 33 8 | 31 14 | 56 49 | 5 | 34 | 10 | 16 | 20 |
| III. 0 | 2 28 | 32 10 | oIX | III. 0 | 33 32 | 31 25 | 57 9 | oIX. | 36 | 10 | 16 | 21 |
| 5 | 2 28 | 32 13 | 25 | 5 | 33 56 | 31 36 | 57 29 | 25 | 39 | 10 | 18 | 23 |
| 10 | 2 28 | 32 15 | 20 | 10 | 34 21 | 31 47 | 57 49 | 20 | 42 | 9 | 19 | 24 |
| 15 | 2 29 | 32 18 | 15 | 15 | 34 45 | 31 58 | 58 9 | 15 | 45 | 9 | 20 | 25 |
| 20 | 2 29 | 32 21 | 10 | 20 | 35 8 | 32 9 | 58 28 | 10 | 48 | 8 | 21 | 27 |
| 25 | 2 30 | 32 23 | 5 | 25 | 35 31 | 32 20 | 58 47 | 5 | 51 | 8 | 22 | 28 |
| IV. 0 | 2 30 | 32 26 | oVIII | IV. 0 | 35 54 | 32 30 | 59 5 | oVIII | 54 | 7 | 23 | 29 |
| 5 | 2 31 | 32 29 | 25 | 5 | 36 14 | 32 39 | 59 23 | 25 | 57 | 7 | 23 | 30 |
| 10 | 2 31 | 32 31 | 20 | 10 | 36 34 | 32 48 | 59 40 | 20 | 60 | 6 | 24 | 31 |
| 15 | 2 31 | 32 33 | 15 | 15 | 36 53 | 32 57 | 59 55 | 15 | 63 | 6 | 25 | 32 |
| 20 | 2 32 | 32 35 | 10 | 20 | 37 10 | 33 5 | 60 10 | 10 | 66 | 5 | 26 | 33 |
| 25 | 2 32 | 32 37 | 5 | 25 | 37 24 | 33 12 | 60 23 | 5 | 69 | 4 | 26 | 34 |
| V. 0 | 2 32 | 32 39 | oVII. | V. 0 | 37 39 | 33 18 | 60 34 | oVII. | 72 | 4 | 27 | 34 |
| 5 | 2 32 | 32 40 | 25 | 5 | 37 50 | 33 24 | 60 44 | 25 | 75 | 3 | 27 | 35 |
| 10 | 2 33 | 32 41 | 20 | 10 | 38 0 | 33 28 | 60 52 | 20 | 78 | 3 | 27 | 35 |
| 15 | 2 33 | 32 42 | 15 | 15 | 38 6 | 33 31 | 60 58 | 15 | 81 | 2 | 28 | 36 |
| 20 | 2 33 | 32 43 | 10 | 20 | 38 14 | 33 34 | 61 3 | 10 | 84 | 1 | 28 | 36 |
| 25 | 2 33 | 32 43 | 5 | 25 | 38 17 | 33 36 | 61 6 | 5 | 87 | 1 | 28 | 36 |
| VI. 0 | 2 33 | 32 43 | oVI. | VI. 0 | 38 18 | 33 36 | 61 7 | oVI. | 90 | 0 | 29 | 36 |

# ECLIPSIUM SOLARIUM PERIODUS PLINIANA CURRENTIS SECULI XIIXvi PRIMA.

| Anno Christi Juli. | Med Eclipsis Solis Temp. Æquat. Londini. D. | H. | ′ | Anomalia media Solis. S. | o. | ′ | Argumentum Annuum. S. | o. | ′ | Lat. Lunæ à Sole. ′ | ″ | Plaga Lunæ. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1701 | Jan. 27 | 11 | 6 | 7 | 10 | 8 | 11 | 7 | 27 | 35 | 20 | Bor. asc. |
| | Jul. 23 | 21 | 30 | 1 | 5 | 1 | 4 | 10 | 37 | 26 | 22 | Aust. desc. |
| 1702 | Jan. 16 | 13 | 42 | 6 | 29 | 9 | 9 | 16 | 47 | 3 | 35 | Aust. asc. |
| | Jul. 13 | 9 | 39 | 0 | 24 | 25 | 2 | 20 | 47 | 18 | 14 | Bor. desc. |
| 1703 | Jan. 5 | 23 | 27 | 6 | 18 | 27 | 7 | 26 | 20 | 43 | 50 | Aust. asc. |
| | Jul. 2 | 14 | 36½ | 0 | 13 | 32 | 1 | 0 | 44 | 61 | 0 | Bor. desc. |
| | Nov. 27 | 3 | 44 | 5 | 8 | 57 | 5 | 9 | 30 | 79 | 13 | Bor. asc. |
| | Dec. 26 | 14 | 15 | 6 | 7 | 58 | 6 | 6 | 3 | 84 | 20 | Aust. asc. |
| 1704 | Maii 22 | 1 | 7 | 11 | 3 | 18 | 10 | 15 | 27 | 51 | 33 | Aust. desc. |
| | Nov. 15 | 17 | 38 | 4 | 28 | 25 | 3 | 19 | 13 | 38 | 37 | Bor. asc. |
| 1705 | Maii 11 | 7 | 55 | 10 | 22 | 28 | 8 | 25 | 26 | 8 | 26 | Aust. desc. |
| | Nov. 5 | 1 | 20 | 4 | 17 | 38 | 1 | 28 | 45 | 1 | 29 | Aust. asc. |
| 1706 | Apr. 30 | 21 | 34 | 10 | 11 | 56 | 7 | 5 | 37½ | 36 | 12 | Bor. desc. |
| | Octob. 25 | 2 | 19 | 4 | 6 | 35 | 0 | 8 | 3 | 40 | 21 | Aust. asc. |
| 1707 | Apr. 20 | 14 | 19 | 10 | 1 | 32 | 5 | 16 | 27 | 80 | 24 | Bor. desc. |
| | Sept. 14 | 11 | 4 | 2 | 26 | 17 | 9 | 20 | 40 | 81 | 33 | Bor. asc. |
| | Octob. 14 | 2 | 16 | 3 | 25 | 30 | 10 | 17 | 23 | 78 | 36 | Aust. asc. |
| 1708 | Mart. 10 | 18 | 53 | 8 | 22 | 2 | 3 | 0 | 27 | 33 | 21 | Aust. desc. |
| | Sept. 2 | 21 | 0 | 2 | 15 | 35 | 8 | 1 | 14 | 39 | 43 | Bor. asc. |
| 1709 | Feb. 28 | 0 | 17 | 8 | 11 | 10 | 1 | 10 | 2 | 7 | 26 | Bor. desc. |
| | Aug. 23 | 12 | 36 | 2 | 5 | 8 | 6 | 11 | 23 | 4 | 30 | Aust. asc. |
| 1710 | Feb. 17 | 0 | 14 | 8 | 0 | 4 | 11 | 19 | 24 | 46 | 31 | Bor. desc. |
| | Aug. 13 | 5 | 16 | 1 | 24 | 43 | 4 | 21 | 37 | 49 | 15 | Aust. asc. |
| 1711 | Feb. 6 | 1 | 38 | 7 | 19 | 1 | 9 | 28 | 45 | 84 | 45 | Bor. desc. |
| | Julii 4 | 7 | 20 | 0 | 15 | 7 | 2 | 6 | 42 | 61 | 10 | Bor. asc. |
| | Dec. 27 | 22 | 1 | 6 | 9 | 11½ | 7 | 11 | 46 | 38 | 58 | Aust. desc. |
| 1712 | Jun. 22 | 10 | 34½ | 0 | 4 | 10 | 0 | 16 | 36 | 18 | 43 | Bor. asc. |
| | Dec. 16 | 13 | 27 | 5 | 28 | 44 | 5 | 21 | 31 | 2 | 35 | Bor. desc. |
| 1713 | Jun. 11 | 11 | 18 | 11 | 23 | 6 | 10 | 26 | 24 | 23 | 40 | Aust. asc. |
| | Dec. 6 | 4 | 2 | 5 | 18 | 14 | 4 | 1 | 14 | 43 | 49 | Bor. desc. |
| 1714 | Maii 31 | 16 | 44 | 11 | 12 | 13 | 9 | 6 | 23 | 66 | 25 | Aust. asc. |
| | Nov. 25 | 13 | 28 | 5 | 7 | 31 | 2 | 10 | 46 | 83 | 8 | Bor. desc. |
| 1715 | Apr. 21 | 21 | 35½ | 10 | 2 | 44 | 6 | 21 | 33 | 43 | 25 | Bor. asc. |
| | Octob. 15 | 20 | 55 | 3 | 27 | 10 | 11 | 23 | 28 | 42 | 37 | Aust. desc. |
| 1716 | Apr. 10 | 14 | 27 | 9 | 22 | 20 | 5 | 1 | 46 | 1 | 19 | Aust. asc. |
| | Octob. 3 | 22 | 6 | 3 | 16 | 7 | 10 | 2 | 53½ | 3 | 2 | Aust. desc. |
| 1717 | Mart. 31 | 4 | 35 | 9 | 11 | 49 | 3 | 11 | 51½ | 45 | 5 | Aust. asc. |
| | Sept. 23 | 6 | 21 | 3 | 5 | 21 | 8 | 12 | 37 | 38 | 30 | Bor. desc |
| 1718 | Feb. 18 | 19 | 30 | 8 | 1 | 46 | 0 | 25 | 31 | 74 | 30 | Bor. asc. |
| | Mart. 20 | 12 | 5 | 9 | 1 | 1½ | 1 | 21 | 39 | 86 | 7 | Aust. asc. |
| | Sept. 12 | 20 | 38 | 2 | 24 | 50 | 6 | 22 | 38 | 81 | 0 | Bor. desc. |

# ECLIPSIUM LUNARIUM PERIODUS PLINIANA, CURRENTIS SECULI XIIXvi PRIMA.

| Anno Christi Jul. | Med. Eclipsis Lunæ Temp. Æquat. Londini. | D. | H. | ′ | Anomalia media Solis. | S. | o. | ′ | Argumentum Annuum. | S. | o. | ′ | Lat. Lunæ à Sole. | ′ | ″ | Plaga Lunæ. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1701 | *Feb.* | 11 | 11 | 29 | | 7 | 24 | 56 | | 11 | 20 | 51½ | | 47 | 55 | *Bor. desc.* |
| | *Aug.* | 7 | 1 | 32 | | 1 | 18 | 59 | | 4 | 22 | 42 | | 48 | 24 | *Aust. asc.* |
| 1702 | *Dec.* | 22 | 18 | 59 | | 6 | 4 | 28 | | 7 | 13 | 32 | | 35 | 43 | *Aust. desc.* |
| 1703 | *Jun.* | 17 | 13 | 10 | | 11 | 28 | 41 | | 0 | 17 | 58 | | 17 | 43 | *Bor. asc.* |
| | *Dec.* | 11 | 18 | 30 | | 5 | 23 | 21 | | 5 | 22 | 41 | | 2 | 1 | *Bor. desc.* |
| 1704 | *Jun.* | 6 | 6 | 24 | | 11 | 18 | 17 | | 10 | 28 | 22 | | 28 | 14 | *Aust. asc.* |
| | *Nov.* | 29 | 19 | 10 | | 5 | 12 | 17 | | 4 | 1 | 53 | | 40 | 3 | *Bor. desc.* |
| 1706 | *Apr.* | 16 | 13 | 33 | | 9 | 27 | 49 | | 6 | 23 | 19 | | 40 | 10 | *Bor. asc.* |
| | *Octob.* | 10 | 6 | 56 | | 3 | 21 | 59 | | 11 | 24 | 55 | | 41 | 17 | *Aust. asc.* |
| 1707 | *Apr.* | 5 | 13 | 38½ | | 9 | 16 | 43 | | 5 | 2 | 56 | | 0 | 52 | *Aust. asc.* |
| | *Sept.* | 29 | 22 | 25 | | 3 | 11 | 32 | | 10 | 4 | 53 | | 1 | 41 | *Bor. desc.* |
| 1708 | *Mart.* | 24 | 17 | 38 | | 9 | 5 | 47 | | 3 | 12 | 37 | | 42 | 13 | *Aust. asc.* |
| | *Sept.* | 18 | 8 | 59 | | 3 | 0 | 52 | | 8 | 14 | 43 | | 43 | 52 | *Bor. desc.* |
| 1710 | *Feb.* | 2 | 10 | 49½ | | 7 | 15 | 43 | | 11 | 6 | 25½ | | 34 | 0 | *Bor. asc.* |
| | *Jul.* | 28 | 22 | 0 | | 1 | 9 | 38 | | 4 | 8 | 31½ | | 31 | 42 | *Aust. desc.* |
| 1711 | *Jan.* | 23 | 0 | 32½ | | 7 | 5 | 11 | | 9 | 16 | 11 | | 7 | 36 | *Aust. asc.* |
| | *Jul.* | 18 | 5 | 52 | | 0 | 28 | 52 | | 2 | 18 | 32 | | 11 | 48 | *Bor. desc.* |
| 1712 | *Jan.* | 12 | 7 | 47 | | 6 | 24 | 23 | | 7 | 25 | 40 | | 47 | 21 | *Aust. asc.* |
| | *Jul.* | 6 | 20 | 19½ | | 0 | 18 | 21½ | | 0 | 28 | 49 | | 56 | 40 | *Bor. desc.* |
| 1713 | *Maii* | 28 | 6 | 30 | | 11 | 9 | 6 | | 10 | 14 | 22 | | 50 | 45 | *Aust. desc.* |
| | *Nov.* | 20 | 15 | 16 | | 5 | 2 | 55½ | | 3 | 17 | 15 | | 43 | 10 | *Bor. asc.* |
| 1714 | *Maii* | 17 | 19 | 5 | | 10 | 28 | 31 | | 8 | 24 | 34 | | 6 | 14 | *Aust. desc.* |
| | *Nov.* | 10 | 1 | 4 | | 4 | 22 | 14 | | 1 | 26 | 49½ | | 2 | 42 | *Bor. asc.* |
| 1715 | *Maii* | 7 | 0 | 31 | | 10 | 17 | 38½ | | 7 | 4 | 29 | | 36 | 41 | *Bor. desc.* |
| | *Octob.* | 30 | 16 | 0 | | 4 | 11 | 45 | | 0 | 6 | 38 | | 39 | 13 | *Aust. asc.* |
| 1717 | *Mart.* | 15 | 15 | 15 | | 8 | 26 | 29 | | 2 | 28 | 18 | | 38 | 57 | *Aust. desc.* |
| | *Sept.* | 9 | 5 | 56 | | 2 | 21 | 32 | | 8 | 0 | 23 | | 37 | 25 | *Bor. asc.* |
| 1718 | *Mart.* | 5 | 3 | 58 | | 8 | 15 | 55 | | 1 | 8 | 12 | | 3 | 41 | *Bor. desc.* |
| | *Aug.* | 29 | 7 | 52 | | 2 | 10 | 31 | | 6 | 10 | 1 | | 3 | 39 | *Aust. asc.* |

In hac itaq; Eclipsium Periodo habentur XXIX Eclipses Lunares & XLI Solares, aliasq; quinq; quas, ne inutiliter ultra terminos Paginæ nostræ excrescret earum Catalogus, consulto omisimus. Quatuor autem obtingunt in extremis tantum partibus Terræ, juxta Polum Australinum, ac ubi maximæ non nisi ad paucos Digitos assurgunt, atq; insuper post aliquot Periodos, descendente Luna in Austrum, Penumbra ejus Terræ discum deseret. Fiunt vero in Noviluniis *Martii* 1707, *Januarii* 1711, *Octobris* 1714, & *Augusti* 1718. Quinta *Maii* 2do 1714, unius tantum erat Digiti prope Polum Boreum, ita ut Novilunium *Maii* 1732 non erit Eclipticum.

# TABULA ÆQUATIONIS INTERVALLI ECLIPSIUM POST PERIODUM PLINIANAM.

| Anom. med. Solis. | Minut. Temp. Subtr. | | Diff. Lat. | | Anom. med. Solis. | Minut. Temp. Adde. | | Diff Lat. | | Argument. Ann. | Minut. Temp. Subtr. | | Argument. Ann. | Minut. Temp. Adde. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S o | ′ | ″ | ′ | ″ | S o | ′ | ″ | ′ | ″ | S o | ′ | ″ | S o | ′ | ″ |
| O o | 45 | 2 | 4 | 27 | VI. o | 46 | 54 | 0 | 23 | O. o | 29 | 7 | VI. o | 25 | 5 |
| 5 | 44 | 30 | 4 | 26 | 5 | 46 | 19 | 0 | 24 | 5 | 29 | 5 | 5 | 25 | 3 |
| 10 | 43 | 44 | 4 | 24 | 10 | 45 | 22 | 0 | 26 | 10 | 28 | 44 | 10 | 24 | 50 |
| 15 | 42 | 36 | 4 | 21 | 15 | 44 | 2 | 0 | 29 | 15 | 28 | 12 | 15 | 24 | 30 |
| 20 | 41 | 9 | 4 | 16 | 20 | 42 | 27 | 0 | 34 | 20 | 27 | 18 | 20 | 24 | 7 |
| 25 | 39 | 25 | 4 | 11 | 25 | 40 | 26 | 0 | 39 | 25 | 26 | 12 | 25 | 23 | 30 |
| I. o | 37 | 23 | 4 | 6 | VII o | 37 | 59 | 0 | 46 | I. o | 24 | 47 | VII o | 22 | 41 |
| 5 | 35 | 4 | 4 | 0 | 5 | 35 | 22 | 0 | 53 | 5 | 23 | 19 | 5 | 21 | 42 |
| 10 | 32 | 30 | 3 | 53 | 10 | 32 | 28 | 1 | 0 | 10 | 21 | 38 | 10 | 20 | 38 |
| 15 | 29 | 41 | 3 | 45 | 15 | 29 | 18 | 1 | 8 | 15 | 19 | 40 | 15 | 19 | 27 |
| 20 | 26 | 37 | 3 | 37 | 20 | 25 | 55 | 1 | 17 | 20 | 17 | 36 | 20 | 18 | 10 |
| 25 | 23 | 21 | 3 | 28 | 25 | 22 | 24 | 1 | 26 | 25 | 15 | 25 | 25 | 16 | 35 |
| II. o | 19 | 55 | 3 | 19 | VIII o | 18 | 40 | 1 | 36 | II. o | 13 | 11 | VIII o | 15 | 0 |
| 5 | 16 | 20 | 3 | 9 | 5 | 14 | 50 | 1 | 46 | 5 | 10 | 48 | 5 | 13 | 15 |
| 10 | 12 | 32 | 2 | 59 | 10 | 10 | 53 | 1 | 57 | 10 | 8 | 21 | 10 | 11 | 21 |
| 15 | 8 | 43 | 2 | 49 | 15 | 6 | 55 | 2 | 7 | 15 | 5 | 53 | 15 | 9 | 19 |
| 20 | 4 | 48 | 2 | 38 | 20 | + 2 | 51 | 2 | 18 | 20 | 3 | 25 | 20 | 7 | 12 |
| 25 | — 0 | 45 | 2 | 28 | 25 | — 1 | 11 | 2 | 29 | 25 | — 1 | 0 | 25 | 5 | 0 |
| III. o | + 3 | 18 | 2 | 17 | IX. o | 5 | 13 | 2 | 40 | III. o | + 1 | 20 | IX. o | 2 | 42 |
| 5 | 7 | 19 | 2 | 7 | 5 | 9 | 7 | 2 | 50 | 5 | 3 | 42 | 5 | + 0 | 22 |
| 10 | 11 | 20 | 1 | 56 | 10 | 12 | 58 | 3 | 0 | 10 | 5 | 59 | 10 | — 2 | 0 |
| 15 | 15 | 13 | 1 | 46 | 15 | 16 | 42 | 3 | 10 | 15 | 8 | 6 | 15 | 4 | 31 |
| 20 | 19 | 4 | 1 | 36 | 20 | 20 | 18 | 3 | 20 | 20 | 10 | 10 | 20 | 6 | 57 |
| 25 | 22 | 46 | 1 | 26 | 25 | 23 | 46 | 3 | 29 | 25 | 12 | 8 | 25 | 9 | 23 |
| IV. o | 26 | 17 | 1 | 16 | X. o | 26 | 58 | 3 | 38 | IV. o | 13 | 59 | X. o | 11 | 45 |
| 5 | 29 | 39 | 1 | 7 | 5 | 29 | 57 | 3 | 46 | 5 | 15 | 44 | 5 | 14 | 4 |
| 10 | 32 | 47 | 0 | 59 | 10 | 32 | 48 | 3 | 54 | 10 | 17 | 18 | 10 | 16 | 22 |
| 15 | 35 | 39 | 0 | 52 | 15 | 35 | 21 | 4 | 0 | 15 | 18 | 40 | 15 | 18 | 33 |
| 20 | 38 | 18 | 0 | 45 | 20 | 37 | 38 | 4 | 6 | 20 | 20 | 0 | 20 | 20 | 30 |
| 25 | 40 | 40 | 0 | 39 | 25 | 39 | 35 | 4 | 12 | 25 | 21 | 10 | 25 | 22 | 21 |
| V. o | 42 | 37 | 0 | 34 | XI. o | 41 | 17 | 4 | 17 | V. o | 22 | 11 | XI. o | 23 | 59 |
| 5 | 44 | 11 | 0 | 30 | 5 | 42 | 42 | 4 | 21 | 5 | 22 | 57 | 5 | 25 | 29 |
| 10 | 45 | 30 | 0 | 26 | 10 | 43 | 50 | 4 | 24 | 10 | 23 | 41 | 10 | 26 | 45 |
| 15 | 46 | 25 | 0 | 24 | 15 | 44 | 35 | 4 | 26 | 15 | 24 | 19 | 15 | 27 | 36 |
| 20 | 46 | 58 | 0 | 23 | 20 | 45 | 2 | 4 | 27 | 20 | 24 | 39 | 20 | 28 | 27 |
| 25 | 47 | 7 | 0 | 23 | 25 | 45 | 13 | 4 | 28 | 25 | 24 | 59 | 25 | 28 | 54 |
| VI. o | +46 | 54 | 0 | 23 | XII o | —45 | 2 | 4 | 27 | VI. o | +25 | 5 | XII o | —29 | 7 |

| Annis Julianis ineuntibus. | Mercurius ab Æquinoct. | Aph. ☿ ♈ 12° | Nod. ☿ ♉ 14° | Annis Julianis ineuntibus. | Mercurius ab Æquinoct. | Aphel. ☿ ♈ 12° | Nod. ☿ ♉ 14° |
|---|---|---|---|---|---|---|---|
| | S ° ′ ″ | ′ ″ | ′ ″ | | S ° ′ ″ | ° ′ ″ | ° ′ ″ |
| 1661 | 3 17 18 47 | 9 15 | 14 50 | 1696 | 7 10 9 17 | 39 54 | 44 0 |
| 62 | 5 11 1 49 | 10 7 | 15 40 | 97 | 9 7 57 51 | 40 47 | 44 50 |
| 63 | 7 4 44 51 | 11 0 | 16 30 | 98 | 11 1 40 53 | 41 40 | 45 40 |
| 64 | 8 28 27 53 | 11 52 | 17 20 | 99 | 0 25 23 55 | 42 32 | 46 30 |
| 1665 | 10 26 16 27 | 12 45 | 18 10 | 1700 | 2 19 6 57 | 43 25 | 47 20 |
| 1666 | 0 19 59 29 | 13 37 | 19 0 | 1701 | 4 16 55 32 | 44 18 | 48 10 |
| 67 | 2 13 42 31 | 14 30 | 19 50 | 2 | 6 10 38 34 | 45 10 | 49 0 |
| 68 | 4 7 25 33 | 15 22 | 20 40 | 3 | 8 4 21 36 | 46 3 | 49 50 |
| 69 | 6 5 14 8 | 16 15 | 21 30 | 4 | 9 28 4 38 | 46 55 | 50 40 |
| 1670 | 7 28 57 10 | 17 8 | 22 20 | 1705 | 11 25 53 12 | 47 48 | 51 30 |
| 1671 | 9 22 40 12 | 18 0 | 23 10 | 1706 | 1 19 36 14 | 48 40 | 52 20 |
| 72 | 11 16 23 14 | 18 53 | 24 0 | 7 | 3 13 19 16 | 49 33 | 53 10 |
| 73 | 1 14 11 48 | 19 46 | 24 50 | 8 | 5 7 2 18 | 50 25 | 54 0 |
| 74 | 3 7 54 51 | 20 38 | 25 40 | 9 | 7 4 50 53 | 51 18 | 54 50 |
| 1675 | 5 1 37 53 | 21 31 | 26 30 | 1710 | 8 28 33 55 | 52 11 | 55 40 |
| 1676 | 6 25 20 55 | 22 23 | 27 20 | 1711 | 10 22 16 57 | 53 3 | 56 30 |
| 77 | 8 23 9 29 | 23 16 | 28 10 | 12 | 0 15 59 59 | 53 56 | 57 20 |
| 78 | 10 16 52 31 | 24 8 | 29 0 | 13 | 2 13 48 33 | 54 49 | 58 10 |
| 79 | 0 10 35 33 | 25 1 | 29 50 | 14 | 4 7 31 35 | 55 41 | 59 0 |
| 1680 | 2 4 18 35 | 25 53 | 30 40 | 1715 | 6 1 14 37 | 56 34 | 59 50 |
| 1681 | 4 2 7 9 | 26 46 | 31 30 | 1716 | 7 24 57 40 | 57 26 | 15 0 40 |
| 82 | 5 25 50 11 | 27 38 | 32 20 | 17 | 9 22 46 14 | 58 19 | 1 30 |
| 83 | 7 19 33 13 | 28 31 | 33 10 | 18 | 11 16 29 16 | 59 11 | 2 20 |
| 84 | 9 13 16 15 | 29 23 | 34 0 | 19 | 1 10 12 18 | 13 0 4 | 3 10 |
| 1685 | 11 11 4 50 | 30 16 | 34 50 | 1720 | 3 3 55 20 | 0 56 | 4 0 |
| 1686 | 1 4 47 52 | 31 9 | 35 40 | 1721 | 5 1 43 55 | 1 49 | 4 50 |
| 87 | 2 28 30 54 | 32 2 | 36 30 | 22 | 6 25 26 57 | 2 41 | 5 40 |
| 88 | 4 22 13 56 | 32 54 | 37 20 | 23 | 8 19 9 59 | 3 34 | 6 30 |
| 89 | 6 20 2 30 | 33 47 | 38 10 | 24 | 10 12 53 1 | 4 26 | 7 20 |
| 1690 | 8 13 45 32 | 34 39 | 39 0 | 1725 | 0 10 41 35 | 5 19 | 8 10 |
| 1691 | 10 7 28 34 | 35 32 | 39 50 | 1726 | 2 4 24 37 | 6 12 | 9 0 |
| 92 | 0 1 11 36 | 36 24 | 40 40 | 27 | 3 28 7 39 | 7 5 | 9 50 |
| 93 | 1 29 0 11 | 37 17 | 41 30 | 28 | 5 21 50 41 | 7 57 | 10 40 |
| 94 | 3 22 43 13 | 38 9 | 42 20 | 29 | 7 19 39 15 | 8 50 | 11 30 |
| 1695 | 5 16 26 15 | 39 2 | 43 10 | 1730 | 9 13 22 17 | 9 42 | 12 20 |

| Annis Juli-anis ineun-tibus. | Mercurius ab Æquinoct. | | | | Aph. ☿ ♌ 12° | | Nod. ☿ ♉ 14° | |
|---|---|---|---|---|---|---|---|---|
| | s | o | ′ | ″ | ′ | ″ | ′ | ″ |
| 1731 | 11 | 7 | 5 | 19 | 10 | 35 | 13 | 10 |
| 32 | 1 | 0 | 48 | 21 | 11 | 27 | 14 | 0 |
| 33 | 2 | 28 | 36 | 56 | 12 | 20 | 14 | 50 |
| 34 | 4 | 22 | 19 | 58 | 13 | 12 | 15 | 40 |
| 1735 | 6 | 16 | 3 | 0 | 14 | 5 | 16 | 30 |
| 1736 | 8 | 9 | 46 | 2 | 14 | 57 | 17 | 20 |
| 37 | 10 | 7 | 34 | 36 | 15 | 50 | 18 | 10 |
| 38 | 0 | 1 | 17 | 38 | 16 | 43 | 19 | 0 |
| 39 | 1 | 25 | 0 | 40 | 17 | 35 | 19 | 50 |
| 1740 | 3 | 18 | 43 | 42 | 18 | 28 | 20 | 40 |
| 1741 | 5 | 16 | 32 | 17 | 19 | 21 | 21 | 30 |
| 42 | 7 | 10 | 15 | 19 | 20 | 13 | 22 | 20 |
| 43 | 9 | 3 | 58 | 21 | 21 | 6 | 23 | 10 |
| 44 | 10 | 27 | 41 | 23 | 21 | 58 | 24 | 0 |
| 1745 | 0 | 25 | 29 | 57 | 22 | 51 | 24 | 50 |
| 1746 | 2 | 19 | 12 | 59 | 23 | 43 | 25 | 40 |
| 47 | 4 | 12 | 56 | 1 | 24 | 36 | 26 | 30 |
| 48 | 6 | 6 | 39 | 3 | 25 | 28 | 27 | 20 |
| 49 | 8 | 4 | 27 | 38 | 26 | 21 | 28 | 10 |
| 1750 | 9 | 28 | 10 | 40 | 27 | 14 | 29 | 0 |
| 1751 | 11 | 21 | 53 | 42 | 28 | 6 | 29 | 50 |
| 52 | 1 | 15 | 36 | 44 | 28 | 59 | 30 | 40 |
| 53 | 3 | 13 | 25 | 18 | 29 | 52 | 31 | 30 |
| 54 | 5 | 7 | 8 | 20 | 30 | 44 | 32 | 20 |
| 1755 | 7 | 0 | 51 | 22 | 31 | 37 | 33 | 10 |
| 1756 | 8 | 24 | 34 | 24 | 32 | 29 | 34 | 0 |
| 57 | 10 | 22 | 22 | 59 | 33 | 22 | 34 | 50 |
| 58 | 0 | 16 | 6 | 1 | 34 | 14 | 35 | 40 |
| 59 | 2 | 9 | 49 | 3 | 35 | 7 | 36 | 30 |
| 1760 | 4 | 3 | 32 | 5 | 35 | 59 | 37 | 20 |
| 1761 | 6 | 1 | 20 | 39 | 36 | 52 | 38 | 10 |
| 62 | 7 | 25 | 3 | 41 | 37 | 44 | 39 | 0 |
| 63 | 9 | 18 | 46 | 43 | 38 | 37 | 39 | 50 |
| 64 | 11 | 12 | 29 | 45 | 39 | 29 | 40 | 40 |
| 1765 | 1 | 10 | 18 | 20 | 40 | 22 | 41 | 30 |

| Annis Juli-anis ineun-tibus. | Mercurius ab Æquinoct. | | | | Aphel. ☿ ♌ 13° | | | Nod. ☿ ♉ 15° | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | s | o | ′ | ″ | o | ′ | ″ | o | ′ | ″ |
| 1766 | 3 | 4 | 1 | 22 | 41 | 15 | | 42 | 20 | |
| 67 | 4 | 27 | 44 | 24 | 42 | 8 | | 43 | 10 | |
| 68 | 6 | 21 | 27 | 26 | 43 | 0 | | 44 | 0 | |
| 69 | 8 | 19 | 16 | 1 | 43 | 53 | | 44 | 50 | |
| 1770 | 10 | 12 | 59 | 3 | 44 | 45 | | 45 | 40 | |
| 1771 | 0 | 6 | 42 | 5 | 45 | 38 | | 46 | 30 | |
| 72 | 2 | 0 | 25 | 7 | 46 | 30 | | 47 | 20 | |
| 73 | 3 | 28 | 13 | 41 | 47 | 23 | | 48 | 10 | |
| 74 | 5 | 21 | 56 | 43 | 48 | 15 | | 49 | 0 | |
| 1775 | 7 | 15 | 39 | 45 | 49 | 8 | | 49 | 50 | |
| 1776 | 9 | 9 | 22 | 47 | 50 | 0 | | 50 | 40 | |
| 77 | 11 | 7 | 11 | 21 | 51 | 53 | | 51 | 30 | |
| 78 | 1 | 0 | 54 | 23 | 51 | 46 | | 52 | 20 | |
| 79 | 2 | 24 | 37 | 25 | 52 | 38 | | 53 | 10 | |
| 1780 | 4 | 18 | 20 | 27 | 53 | 31 | | 54 | 0 | |
| 1781 | 6 | 16 | 9 | 2 | 54 | 24 | | 54 | 50 | |
| 82 | 8 | 9 | 52 | 4 | 55 | 16 | | 55 | 40 | |
| 83 | 10 | 3 | 35 | 6 | 56 | 8 | | 56 | 30 | |
| 84 | 11 | 27 | 18 | 8 | 57 | 1 | | 57 | 20 | |
| 1785 | 1 | 25 | 6 | 42 | 57 | 54 | | 58 | 10 | |
| 1786 | 3 | 18 | 49 | 44 | 58 | 46 | | 59 | 0 | |
| 87 | 5 | 12 | 32 | 46 | 59 | 39 | | 59 | 50 | |
| 88 | 7 | 6 | 15 | 48 | 14 | 0 | 31 | 16 | 0 | 40 |
| 89 | 9 | 4 | 4 | 23 | 1 | 24 | | 1 | 30 | |
| 1790 | 10 | 27 | 47 | 25 | 2 | 17 | | 2 | 20 | |
| 1791 | 0 | 21 | 30 | 27 | 3 | 9 | | 3 | 10 | |
| 92 | 2 | 15 | 13 | 29 | 4 | 2 | | 4 | 0 | |
| 93 | 4 | 13 | 2 | 3 | 4 | 55 | | 4 | 50 | |
| 94 | 6 | 6 | 45 | 5 | 5 | 47 | | 5 | 40 | |
| 1795 | 8 | 0 | 28 | 7 | 6 | 40 | | 6 | 30 | |
| 1796 | 9 | 24 | 11 | 9 | 7 | 32 | | 7 | 20 | |
| 97 | 11 | 21 | 59 | 44 | 8 | 25 | | 8 | 10 | |
| 98 | 1 | 15 | 42 | 46 | 9 | 17 | | 9 | 0 | |
| 99 | 3 | 9 | 25 | 48 | 10 | 10 | | 9 | 50 | |
| 1800 | 5 | 3 | 8 | 50 | 11 | 2 | | 10 | 40 | |

# *MEDIUS MOTUS MERCURII AD DIES MENSIUM.*

| *Die Mensis.* | JANUARII *Medius Motus Mercurii.* | | | | FEBRUARII *Medius Motus Mercurii.* | | | | MARTII *Medius Motus Mercurii.* | | | | APRILIS *Medius Motus Mercurii.* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* |
| 1 | 0 | 4 | 5 | 32 | 4 | 10 | 57 | 21 | 8 | 5 | 32 | 33 | 0 | 12 | 24 | 22 |
| 2 | 0 | 8 | 11 | 5 | 4 | 15 | 2 | 54 | 8 | 9 | 38 | 6 | 0 | 16 | 29 | 55 |
| 3 | 0 | 12 | 16 | 37 | 4 | 19 | 8 | 26 | 8 | 13 | 43 | 38 | 0 | 20 | 35 | 27 |
| 4 | 0 | 16 | 22 | 10 | 4 | 23 | 13 | 59 | 8 | 17 | 49 | 11 | 0 | 24 | 41 | 0 |
| 5 | 0 | 20 | 27 | 43 | 4 | 27 | 19 | 31 | 8 | 21 | 54 | 44 | 0 | 28 | 46 | 32 |
| 6 | 0 | 24 | 33 | 15 | 5 | 1 | 25 | 4 | 8 | 26 | 0 | 16 | 1 | 2 | 52 | 5 |
| 7 | 0 | 28 | 38 | 48 | 5 | 5 | 30 | 37 | 9 | 0 | 5 | 49 | 1 | 6 | 57 | 37 |
| 8 | 1 | 2 | 44 | 20 | 5 | 9 | 36 | 9 | 9 | 4 | 11 | 21 | 1 | 11 | 3 | 10 |
| 9 | 1 | 6 | 49 | 53 | 5 | 13 | 41 | 42 | 9 | 8 | 16 | 54 | 1 | 15 | 8 | 43 |
| 10 | 1 | 10 | 55 | 25 | 5 | 17 | 47 | 15 | 9 | 12 | 22 | 26 | 1 | 19 | 14 | 15 |
| 11 | 1 | 15 | 0 | 58 | 5 | 21 | 52 | 47 | 9 | 16 | 27 | 59 | 1 | 23 | 19 | 48 |
| 12 | 1 | 19 | 6 | 31 | 5 | 25 | 58 | 19 | 9 | 20 | 33 | 32 | 1 | 27 | 25 | 20 |
| 13 | 1 | 23 | 12 | 3 | 6 | 0 | 3 | 52 | 9 | 24 | 39 | 5 | 2 | 1 | 30 | 53 |
| 14 | 1 | 27 | 17 | 36 | 6 | 4 | 9 | 25 | 9 | 28 | 44 | 37 | 2 | 5 | 36 | 25 |
| 15 | 2 | 1 | 23 | 9 | 6 | 8 | 14 | 57 | 10 | 2 | 50 | 9 | 2 | 9 | 41 | 58 |
| 16 | 2 | 5 | 28 | 41 | 6 | 12 | 20 | 30 | 10 | 6 | 55 | 42 | 2 | 13 | 47 | 30 |
| 17 | 2 | 9 | 34 | 13 | 6 | 16 | 26 | 2 | 10 | 11 | 1 | 14 | 2 | 17 | 53 | 3 |
| 18 | 2 | 13 | 39 | 46 | 6 | 20 | 31 | 35 | 10 | 15 | 6 | 46 | 2 | 21 | 58 | 35 |
| 19 | 2 | 17 | 45 | 19 | 6 | 24 | 37 | 7 | 10 | 19 | 12 | 19 | 2 | 26 | 4 | 8 |
| 20 | 2 | 21 | 50 | 51 | 6 | 28 | 42 | 40 | 10 | 23 | 17 | 51 | 3 | 0 | 9 | 41 |
| 21 | 2 | 25 | 56 | 23 | 7 | 2 | 48 | 12 | 10 | 27 | 23 | 24 | 3 | 4 | 15 | 13 |
| 22 | 3 | 0 | 1 | 56 | 7 | 6 | 53 | 45 | 11 | 1 | 28 | 56 | 3 | 8 | 20 | 45 |
| 23 | 3 | 4 | 7 | 28 | 7 | 10 | 59 | 17 | 11 | 5 | 34 | 29 | 3 | 12 | 26 | 18 |
| 24 | 3 | 8 | 13 | 1 | 7 | 15 | 4 | 50 | 11 | 9 | 40 | 1 | 3 | 16 | 31 | 51 |
| 25 | 3 | 12 | 18 | 34 | 7 | 19 | 10 | 22 | 11 | 13 | 45 | 34 | 3 | 20 | 37 | 23 |
| 26 | 3 | 16 | 24 | 6 | 7 | 23 | 15 | 55 | 11 | 17 | 51 | 7 | 3 | 24 | 42 | 56 |
| 27 | 3 | 20 | 29 | 39 | 7 | 27 | 21 | 28 | 11 | 21 | 56 | 39 | 3 | 28 | 48 | 28 |
| 28 | 3 | 24 | 35 | 11 | 8 | 1 | 27 | 1 | 11 | 26 | 2 | 12 | 4 | 2 | 54 | 1 |
| 29 | 3 | 28 | 40 | 44 | *In Anno* Biſſextili *poſt* Februarium *adde unius diei motum.* | | | | 0 | 0 | 7 | 45 | 4 | 6 | 59 | 34 |
| 30 | 4 | 2 | 46 | 17 | | | | | 0 | 4 | 13 | 18 | 4 | 11 | 5 | 7 |
| 31 | 4 | 6 | 51 | 49 | | | | | 0 | 8 | 18 | 50 | | | | |
| | *Mot. Aph. & Nodi.* | 0 | | 4 | | | 0 | 9 | | | 0 | 13 | | | 0 | 17 |

## *MEDIUS MOTUS MERCURII AD DIES MENSIUM.*

| *Die Mensis.* | MAII *Medius Motus Mercurii.* | | | | JUNII *Motus Medius Mercurii.* | | | | JULII *Medius Motus Mercurii.* | | | | AUGUSTI *Motus Medius Mercurii.* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *S* | o | ′ | ″ | *S* | o | ′ | ″ | *S* | o | ′ | ″ | *S* | o | ′ | ″ |
| 1 | 4 | 15 | 10 | 39 | 8 | 22 | 2 | 28 | 0 | 24 | 48 | 45 | 5 | 1 | 40 | 33 |
| 2 | 4 | 19 | 16 | 12 | 8 | 26 | 8 | 0 | 0 | 28 | 54 | 17 | 5 | 5 | 46 | 6 |
| 3 | 4 | 23 | 21 | 44 | 9 | 0 | 13 | 33 | 1 | 2 | 59 | 50 | 5 | 9 | 51 | 38 |
| 4 | 4 | 27 | 27 | 17 | 9 | 4 | 19 | 5 | 1 | 7 | 5 | 22 | 5 | 13 | 57 | 11 |
| 5 | 5 | 1 | 32 | 49 | 9 | 8 | 24 | 38 | 1 | 11 | 10 | 55 | 5 | 18 | 2 | 43 |
| 6 | 5 | 5 | 38 | 22 | 9 | 12 | 30 | 10 | 1 | 15 | 16 | 28 | 5 | 22 | 8 | 16 |
| 7 | 5 | 9 | 43 | 54 | 9 | 16 | 35 | 43 | 1 | 19 | 22 | 0 | 5 | 26 | 13 | 48 |
| 8 | 5 | 13 | 49 | 27 | 9 | 20 | 41 | 15 | 1 | 23 | 27 | 32 | 6 | 0 | 19 | 21 |
| 9 | 5 | 17 | 55 | 0 | 9 | 24 | 46 | 48 | 1 | 27 | 33 | 5 | 6 | 4 | 24 | 53 |
| 10 | 5 | 22 | 0 | 32 | 9 | 28 | 52 | 20 | 2 | 1 | 38 | 37 | 6 | 8 | 30 | 26 |
| 11 | 5 | 26 | 6 | 5 | 10 | 2 | 57 | 53 | 2 | 5 | 44 | 10 | 6 | 12 | 35 | 58 |
| 12 | 6 | 0 | 11 | 37 | 10 | 7 | 3 | 25 | 2 | 9 | 49 | 42 | 6 | 16 | 41 | 31 |
| 13 | 6 | 4 | 17 | 10 | 10 | 11 | 8 | 58 | 2 | 13 | 55 | 15 | 6 | 20 | 47 | 3 |
| 14 | 6 | 8 | 22 | 43 | 10 | 15 | 14 | 31 | 2 | 18 | 0 | 48 | 6 | 24 | 52 | 36 |
| 15 | 6 | 12 | 28 | 15 | 10 | 19 | 20 | 3 | 2 | 22 | 6 | 21 | 6 | 28 | 58 | 9 |
| 16 | 6 | 16 | 33 | 48 | 10 | 23 | 25 | 36 | 2 | 26 | 11 | 53 | 7 | 3 | 3 | 41 |
| 17 | 6 | 20 | 39 | 20 | 10 | 27 | 31 | 8 | 3 | 0 | 17 | 26 | 7 | 7 | 9 | 14 |
| 18 | 6 | 24 | 44 | 53 | 11 | 1 | 36 | 41 | 3 | 4 | 22 | 58 | 7 | 11 | 14 | 46 |
| 19 | 6 | 28 | 50 | 25 | 11 | 5 | 42 | 14 | 3 | 8 | 28 | 30 | 7 | 15 | 20 | 19 |
| 20 | 7 | 2 | 55 | 58 | 11 | 9 | 47 | 46 | 3 | 12 | 34 | 3 | 7 | 19 | 25 | 51 |
| 21 | 7 | 7 | 1 | 30 | 11 | 13 | 53 | 19 | 3 | 16 | 39 | 35 | 7 | 23 | 31 | 24 |
| 22 | 7 | 11 | 7 | 3 | 11 | 17 | 58 | 51 | 3 | 20 | 45 | 8 | 7 | 27 | 36 | 56 |
| 23 | 7 | 15 | 12 | 35 | 11 | 22 | 4 | 24 | 3 | 24 | 50 | 40 | 8 | 1 | 42 | 29 |
| 24 | 7 | 19 | 18 | 8 | 11 | 26 | 9 | 57 | 3 | 28 | 56 | 13 | 8 | 5 | 48 | 2 |
| 25 | 7 | 23 | 23 | 41 | 0 | 0 | 15 | 30 | 4 | 3 | 1 | 46 | 8 | 9 | 53 | 35 |
| 26 | 7 | 27 | 29 | 13 | 0 | 4 | 21 | 2 | 4 | 7 | 7 | 18 | 8 | 13 | 59 | 8 |
| 27 | 8 | 1 | 34 | 46 | 0 | 8 | 26 | 35 | 4 | 11 | 12 | 51 | 8 | 18 | 4 | 41 |
| 28 | 8 | 5 | 40 | 18 | 0 | 12 | 32 | 7 | 4 | 15 | 18 | 24 | 8 | 22 | 10 | 14 |
| 29 | 8 | 9 | 45 | 51 | 0 | 16 | 37 | 40 | 4 | 19 | 23 | 56 | 8 | 26 | 15 | 46 |
| 30 | 8 | 13 | 51 | 23 | 0 | 20 | 43 | 12 | 4 | 23 | 29 | 28 | 9 | 0 | 21 | 18 |
| 31 | 8 | 17 | 56 | 56 | | | | | 4 | 27 | 35 | 1 | 9 | 4 | 26 | 51 |
| | *Mot. Aph. & Nodi.* | | 0 | ″ 22 | | | 0 | ″ 26 | | | 0 | ″ 30 | | | 0 | ″ 35 |

## *MEDIUS MOTUS MERCURII AD DIES MENSIUM.*

| Die Mensis. | SEPTEMB. Medius Motus Mercurii. | | | | OCTOBRIS Medius Motus Mercurii. | | | | NOVEMB. Medius Motus Mercurii. | | | | DECEMB. Medius Motus Mercurii. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ |
| 1 | 9 | 8 | 32 | 23 | 1 | 11 | 18 | 40 | 5 | 18 | 10 | 29 | 9 | 20 | 56 | 45 |
| 2 | 9 | 12 | 37 | 56 | 1 | 15 | 24 | 13 | 5 | 22 | 16 | 1 | 9 | 25 | 2 | 17 |
| 3 | 9 | 16 | 43 | 38 | 1 | 19 | 29 | 45 | 5 | 26 | 21 | 34 | 9 | 29 | 7 | 50 |
| 4 | 9 | 20 | 49 | 1 | 1 | 23 | 35 | 17 | 6 | 0 | 27 | 6 | 10 | 3 | 13 | 23 |
| 5 | 9 | 24 | 54 | 33 | 1 | 27 | 40 | 50 | 6 | 4 | 32 | 39 | 10 | 7 | 18 | 55 |
| 6 | 9 | 29 | 0 | 6 | 2 | 1 | 46 | 23 | 6 | 8 | 38 | 11 | 10 | 11 | 24 | 28 |
| 7 | 10 | 3 | 5 | 38 | 2 | 5 | 51 | 55 | 6 | 12 | 43 | 44 | 10 | 15 | 30 | 1 |
| 8 | 10 | 7 | 11 | 11 | 2 | 9 | 57 | 28 | 6 | 16 | 49 | 17 | 10 | 19 | 35 | 33 |
| 9 | 10 | 11 | 16 | 43 | 2 | 14 | 3 | 0 | 6 | 20 | 54 | 49 | 10 | 23 | 41 | 6 |
| 10 | 10 | 15 | 22 | 16 | 2 | 18 | 8 | 33 | 6 | 25 | 0 | 22 | 10 | 27 | 46 | 38 |
| 11 | 10 | 19 | 27 | 48 | 2 | 22 | 14 | 5 | 6 | 29 | 5 | 54 | 11 | 1 | 52 | 11 |
| 12 | 10 | 23 | 33 | 21 | 2 | 26 | 19 | 38 | 7 | 3 | 11 | 27 | 11 | 5 | 57 | 43 |
| 13 | 10 | 27 | 38 | 54 | 3 | 0 | 25 | 11 | 7 | 7 | 16 | 59 | 11 | 10 | 3 | 16 |
| 14 | 11 | 1 | 44 | 27 | 3 | 4 | 30 | 43 | 7 | 11 | 22 | 32 | 11 | 14 | 8 | 49 |
| 15 | 11 | 5 | 49 | 59 | 3 | 8 | 36 | 16 | 7 | 15 | 28 | 5 | 11 | 18 | 14 | 21 |
| 16 | 11 | 9 | 55 | 32 | 3 | 12 | 41 | 49 | 7 | 19 | 33 | 37 | 11 | 22 | 19 | 54 |
| 17 | 11 | 14 | 1 | 4 | 3 | 16 | 47 | 21 | 7 | 23 | 39 | 9 | 11 | 26 | 25 | 26 |
| 18 | 11 | 18 | 6 | 37 | 3 | 20 | 52 | 53 | 7 | 27 | 44 | 42 | 0 | 0 | 30 | 59 |
| 19 | 11 | 22 | 12 | 9 | 3 | 24 | 58 | 26 | 8 | 1 | 50 | 15 | 0 | 4 | 36 | 22 |
| 20 | 11 | 26 | 17 | 42 | 3 | 29 | 3 | 59 | 8 | 5 | 55 | 47 | 0 | 8 | 42 | 4 |
| 21 | 0 | 0 | 23 | 15 | 4 | 3 | 9 | 31 | 8 | 10 | 1 | 20 | 0 | 12 | 47 | 37 |
| 22 | 0 | 4 | 28 | 47 | 4 | 7 | 15 | 4 | 8 | 14 | 6 | 52 | 0 | 16 | 53 | 10 |
| 23 | 0 | 8 | 34 | 20 | 4 | 11 | 20 | 36 | 8 | 18 | 12 | 25 | 0 | 20 | 58 | 42 |
| 24 | 0 | 12 | 39 | 53 | 4 | 15 | 26 | 9 | 8 | 22 | 17 | 57 | 0 | 25 | 4 | 15 |
| 25 | 0 | 16 | 45 | 25 | 4 | 19 | 31 | 41 | 8 | 26 | 23 | 30 | 0 | 29 | 9 | 47 |
| 26 | 0 | 20 | 50 | 58 | 4 | 23 | 37 | 14 | 9 | 0 | 29 | 3 | 1 | 3 | 15 | 19 |
| 27 | 0 | 24 | 56 | 30 | 4 | 27 | 42 | 46 | 9 | 4 | 34 | 35 | 1 | 7 | 20 | 52 |
| 28 | 0 | 29 | 2 | 3 | 5 | 1 | 48 | 19 | 9 | 8 | 40 | 7 | 1 | 11 | 26 | 25 |
| 29 | 1 | 3 | 7 | 35 | 5 | 5 | 53 | 51 | 9 | 12 | 45 | 40 | 1 | 15 | 31 | 57 |
| 30 | 1 | 7 | 13 | 7 | 5 | 9 | 59 | 24 | 9 | 16 | 51 | 13 | 1 | 19 | 37 | 30 |
| 31 | | | ′ | ″ | 5 | 14 | 4 | 56 | | | ′ | ″ | 1 | 23 | 43 | 2 |
| | *Mot. Aph. & Nodi.* | o | | 39 | | | o | 43 | | o | | 48 | | | o | 52 |

# MEDII MOTUS MERCURII AB ÆQUINOCTIO.

## IN ANNORUM CENTURIIS.

| Annis Julian. Collect. | Medius Motus Mercurii. | | | | Mot. Aphel. Mercurii. | | | | Motus Nodi Mercurii. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ |
| 100 | 2 | 14 | 1 | 53 | 0 | 1 | 27 | 37 | 0 | 1 | 23 | 20 |
| 200 | 4 | 28 | 3 | 46 | 0 | 2 | 55 | 14 | 0 | 2 | 46 | 40 |
| 300 | 7 | 12 | 5 | 39 | 0 | 4 | 22 | 51 | 0 | 4 | 10 | 0 |
| 400 | 9 | 26 | 7 | 32 | 0 | 5 | 50 | 28 | 0 | 5 | 33 | 20 |
| 500 | 0 | 10 | 9 | 25 | 0 | 7 | 18 | 5 | 0 | 6 | 56 | 40 |
| 600 | 2 | 24 | 11 | 18 | 0 | 8 | 45 | 42 | 0 | 8 | 20 | 0 |
| 700 | 5 | 8 | 13 | 11 | 0 | 10 | 13 | 19 | 0 | 9 | 43 | 20 |
| 800 | 7 | 22 | 15 | 4 | 0 | 11 | 40 | 56 | 0 | 11 | 6 | 40 |
| 900 | 10 | 6 | 16 | 57 | 0 | 13 | 8 | 33 | 0 | 12 | 30 | 0 |
| 1000 | 0 | 20 | 18 | 50 | 0 | 14 | 36 | 10 | 0 | 13 | 53 | 20 |
| 1100 | 3 | 4 | 20 | 43 | 0 | 16 | 3 | 47 | 0 | 15 | 16 | 40 |
| 1200 | 5 | 18 | 22 | 36 | 0 | 17 | 31 | 24 | 0 | 16 | 40 | 0 |
| 1300 | 8 | 2 | 24 | 29 | 0 | 18 | 59 | 1 | 0 | 18 | 3 | 20 |
| 1400 | 10 | 16 | 26 | 22 | 0 | 20 | 26 | 38 | 0 | 19 | 26 | 40 |
| 1500 | 1 | 0 | 28 | 15 | 0 | 21 | 54 | 15 | 0 | 20 | 50 | 0 |
| 1600 | 3 | 14 | 30 | 8 | 0 | 23 | 21 | 52 | 0 | 22 | 13 | 20 |
| 1700 | 5 | 28 | 32 | 1 | 0 | 24 | 49 | 29 | 0 | 23 | 36 | 40 |
| 1800 | 8 | 12 | 33 | 54 | 0 | 26 | 17 | 6 | 0 | 25 | 0 | 0 |
| 1900 | 10 | 26 | 35 | 47 | 0 | 27 | 44 | 43 | 0 | 26 | 23 | 20 |
| 2000 | 1 | 10 | 37 | 40 | 0 | 29 | 12 | 20 | 0 | 27 | 46 | 40 |
| 2100 | 3 | 24 | 39 | 33 | 1 | 0 | 39 | 57 | 0 | 29 | 10 | 0 |
| 2200 | 6 | 8 | 41 | 26 | 1 | 2 | 7 | 34 | 1 | 0 | 33 | 20 |
| 2300 | 8 | 22 | 43 | 19 | 1 | 3 | 35 | 11 | 1 | 1 | 56 | 40 |
| 2400 | 11 | 6 | 45 | 12 | 1 | 5 | 2 | 48 | 1 | 3 | 20 | 0 |
| 2500 | 1 | 20 | 47 | 5 | 1 | 6 | 30 | 25 | 1 | 4 | 43 | 20 |
| 2600 | 4 | 4 | 48 | 58 | 1 | 7 | 58 | 2 | 1 | 6 | 6 | 40 |
| 2700 | 6 | 18 | 50 | 51 | 1 | 9 | 25 | 39 | 1 | 7 | 30 | 0 |
| 2800 | 9 | 2 | 52 | 44 | 1 | 10 | 53 | 16 | 1 | 8 | 53 | 20 |
| 2900 | 11 | 16 | 54 | 37 | 1 | 12 | 20 | 53 | 1 | 10 | 16 | 40 |
| 3000 | 2 | 0 | 56 | 30 | 1 | 13 | 48 | 30 | 1 | 11 | 40 | 0 |
| 3100 | 4 | 14 | 58 | 23 | 1 | 15 | 16 | 7 | 1 | 13 | 3 | 20 |
| 3200 | 6 | 29 | 0 | 16 | 1 | 16 | 43 | 44 | 1 | 14 | 26 | 40 |

## IN HORIS ET MIN.

### Medius Motus Mercurii.

| ″ / H. | ″ ′ o. | ‴ ″ ′ | ⁗ ‴ ″ | ″ / H. | ″ ′ o. | ‴ ″ ′ | ⁗ ‴ ″ |
|---|---|---|---|---|---|---|---|
| 1 | 0 | 10 | 14 | 31 | 5 | 17 | 9 |
| 2 | 0 | 20 | 28 | 32 | 5 | 27 | 23 |
| 3 | 0 | 30 | 42 | 33 | 5 | 37 | 37 |
| 4 | 0 | 40 | 55 | 34 | 5 | 47 | 51 |
| 5 | 0 | 51 | 9 | 35 | 5 | 58 | 5 |
| 6 | 1 | 1 | 23 | 36 | 6 | 8 | 18 |
| 7 | 1 | 11 | 37 | 37 | 6 | 18 | 32 |
| 8 | 1 | 21 | 51 | 38 | 6 | 28 | 46 |
| 9 | 1 | 32 | 5 | 39 | 6 | 39 | 0 |
| 10 | 1 | 42 | 18 | 40 | 6 | 49 | 14 |
| 11 | 1 | 52 | 32 | 41 | 6 | 59 | 28 |
| 12 | 2 | 2 | 46 | 42 | 7 | 9 | 42 |
| 13 | 2 | 13 | 0 | 43 | 7 | 19 | 55 |
| 14 | 2 | 23 | 14 | 44 | 7 | 30 | 9 |
| 15 | 2 | 33 | 28 | 45 | 7 | 40 | 23 |
| 16 | 2 | 43 | 42 | 46 | 7 | 50 | 37 |
| 17 | 2 | 53 | 55 | 47 | 8 | 0 | 51 |
| 18 | 3 | 4 | 9 | 48 | 8 | 11 | 5 |
| 19 | 3 | 14 | 23 | 49 | 8 | 21 | 19 |
| 20 | 3 | 24 | 37 | 50 | 8 | 31 | 32 |
| 21 | 3 | 34 | 51 | 51 | 8 | 41 | 46 |
| 22 | 3 | 45 | 5 | 52 | 8 | 52 | 0 |
| 23 | 3 | 55 | 19 | 53 | 9 | 2 | 14 |
| 24 | 4 | 5 | 32 | 54 | 9 | 12 | 28 |
| 25 | 4 | 15 | 46 | 55 | 9 | 22 | 42 |
| 26 | 4 | 26 | 0 | 56 | 9 | 32 | 55 |
| 27 | 4 | 36 | 14 | 57 | 9 | 43 | 9 |
| 28 | 4 | 46 | 28 | 58 | 9 | 53 | 23 |
| 29 | 4 | 56 | 42 | 59 | 10 | 3 | 37 |
| 30 | 5 | 6 | 55 | 60 | 10 | 13 | 50 |

# TABULA ÆQUATIONUM MERCURII.

*Anomalia media Mercurii.*

| Gr. | Sig. 0. Subtr. ° ′ ″ | Diff. ′ ″ | Sig. I. Subtr. ° ′ ″ | Diff. ′ ″ | Sig. II. Subtr. ° ′ ″ | Diff. ′ ″ | |
|---|---|---|---|---|---|---|---|
| 0 | 0 0 0 | | 9 35 33 | | 17 48 34 | | 30 |
| | | 19 37 | | 18 15 | | 13 55 | |
| 1 | 0 19 37 | | 9 53 48 | | 18 2 29 | | 29 |
| 2 | 0 39 14 | 19 37 | 10 11 58 | 18 10 | 18 16 11- | 13 42 | 28 |
| 3 | 0 58 51 | 19 37 | 10 30 2 | 18 4 | 18 29 41- | 13 30 | 27 |
| 4 | 1 18 27 | 19 36 | 10 48 0 | 17 58 | 18 42 58- | 13 17 | 26 |
| 5 | 1 38 3 | 19 36 | 11 5 52 | 17 52 | 18 56 2- | 13 4 | 25 |
| | | 19 35 | | 17 45 | | 12 51 | |
| 6 | 1 57 38 | | 11 23 37 | | 19 8 53- | | 24 |
| 7 | 2 17 12 | 19 34 | 11 41 15 | 17 38 | 19 21 30- | 12 37 | 23 |
| 8 | 2 36 44 | 19 32 | 11 58 47 | 17 32 | 19 33 53- | 12 23 | 22 |
| 9 | 2 56 15 | 19 31 | 12 16 12 | 17 25 | 19 46 3 | 12 10 | 21 |
| 10 | 3 15 45 | 19 30 | 12 33 30 | 17 18 | 19 57 58 | 11 55 | 20 |
| | | 19 28 | | 17 10 | | 11 39 | |
| 11 | 3 35 13 | | 12 50 40 | | 20 9 37 | | 19 |
| 12 | 3 54 39 | 19 26 | 13 7 42 | 17 2 | 20 21 2 | 11 25 | 18 |
| 13 | 4 14 3 | 19 24 | 13 24 37 | 16 55 | 20 32 11- | 11 9 | 17 |
| 14 | 4 33 24 | 19 21 | 13 41 24 | 16 47 | 20 43 5- | 10 54 | 16 |
| 15 | 4 52 43 | 19 19 | 13 58 2 | 16 38 | 20 53 43- | 10 38 | 15 |
| | | 19 17 | | 16 30 | | 10 22 | |
| 16 | 5 12 0 | | 14 14 32 | | 21 4 5 | | 14 |
| 17 | 5 31 14 | 19 14 | 14 30 53 | 16 21 | 21 14 10 | 10 5 | 13 |
| 18 | 5 50 24 | 19 10 | 14 47 6 | 16 13 | 21 23 58- | 9 48 | 12 |
| 19 | 6 9 31 | 19 7 | 15 3 9 | 16 3 | 21 33 30 | 9 32 | 11 |
| 20 | 6 28 36 | 19 5 | 15 19 3 | 15 54 | 21 42 44 | 9 14 | 10 |
| | | 19 0 | | 15 44 | | 8 55 | |
| 21 | 6 47 36 | | 15 34 47 | | 21 51 39- | | 9 |
| 22 | 7 6 33 | 18 57 | 15 50 21 | 15 34 | 22 0 16 | 8 37 | 8 |
| 23 | 7 25 26 | 18 53 | 16 5 45 | 15 24 | 22 8 36 | 8 20 | 7 |
| 24 | 7 44 15 | 18 49 | 16 20 59 | 15 14 | 22 16 37- | 8 1 | 6 |
| 25 | 8 3 0 | 18 45 | 16 36 2 | 15 3 | 22 24 19 | 7 42 | 5 |
| | | 18 40 | | 14 53 | | 7 22 | |
| 26 | 8 21 40 | | 16 50 55 | | 22 31 41 | | 4 |
| 27 | 8 40 15 | 18 35 | 17 5 37 | 14 42 | 22 38 43 | 7 2 | 3 |
| 28 | 8 58 46 | 18 31 | 17 20 8 | 14 31 | 22 45 25 | 6 42 | 2 |
| 29 | 9 17 12 | 18 26 | 17 34 27 | 14 19 | 22 51 47 | 6 22 | 1 |
| 30 | 9 35 33 | 18 21 | 17 48 34 | 14 7 | 22 57 49 | 6 2 | 0 |
| Gr. | Sig. XI. Adde. | Diff. | Sig. X. Adde. | Diff. | Sig. IX. Adde. | Diff. | Gr. |

*Anomalia media Mercurii.*

| Gr. | Sig. III. *Subtr.* ° ′ ″ | *Diff.* ′ ″ | Sig. IV. *Subtr.* ° ′ ″ | *Diff.* ′ ″ | Sig. V. *Subtr.* ° ′ ″ | *Diff.* ′ ″ | |
|---|---|---|---|---|---|---|---|
| 0 | 22 57 49 | | 22 48 11 | | 14 57 14 | | 30 |
| | | 5 40 | | 7 38 | | 24 18 | |
| 1 | 23 3 29 | | 22 40 33 | | 14 32 56 | | 29 |
| | | 5 19 | | 8 11 | | 24 49 | |
| 2 | 23 8 48- | | 22 32 22- | | 14 8 7 | | 28 |
| | | 4 57 | | 8 42 | | 25 19 | |
| 3 | 23 13 45 | | 22 23 40 | | 13 42 48 | | 27 |
| | | 4 34 | | 9 15 | | 25 49 | |
| 4 | 23 18 19- | | 22 14 25 | | 13 16 59 | | 26 |
| | | 4 12 | | 9 47 | | 26 19 | |
| 5 | 23 22 31- | | 22 4 38 | | 12 50 40 | | 25 |
| | | 3 50 | | 10 20 | | 26 48 | |
| 6 | 23 26 21 | | 21 54 18- | | 12 23 52 | | 24 |
| | | 3 26 | | 10 53 | | 27 15 | |
| 7 | 23 29 47 | | 21 43 25- | | 11 56 37 | | 23 |
| | | 3 3 | | 11 26 | | 27 40 | |
| 8 | 23 32 50 | | 21 31 59 | | 11 28 57 | | 22 |
| | | 2 38 | | 12 0 | | 28 7 | |
| 9 | 23 35 28 | | 21 19 59 | | 11 0 50- | | 21 |
| | | 2 14 | | 12 34 | | 28 33 | |
| 10 | 23 37 42 | | 21 7 25 | | 10 32 18 | | 20 |
| | | 1 49 | | 13 8 | | 28 57 | |
| 11 | 23 39 31- | | 20 54 17 | | 10 3 21- | | 19 |
| | | 1 25 | | 13 42 | | 29 21 | |
| 12 | 23 40 56 | | 20 40 35 | | 9 34 0 | | 18 |
| | | 0 59 | | 14 15 | | 29 43 | |
| 13 | 23 41 55 | | 20 26 20 | | 9 4 17- | | 17 |
| | | 0 34 | | 14 49 | | 30 4 | |
| 14 | 23 42 29 | | 20 11 31 | | 8 34 13 | | 16 |
| | | 0 7 | | 15 23 | | 30 26 | |
| 15 | 23 42 36 | | 19 56 8 | | 8 3 47- | | 15 |
| | | 0 18 | | 15 58 | | 30 45 | |
| 16 | 23 42 18 | | 19 40 9- | | 7 33 2 | | 14 |
| | | 0 46 | | 16 33 | | 31 1 | |
| 17 | 23 41 32 | | 19 23 36- | | 7 2 1 | | 13 |
| | | 1 14 | | 17 7 | | 31 20 | |
| 18 | 23 40 18 | | 19 6 29- | | 6 30 41 | | 12 |
| | | 1 41 | | 17 41 | | 31 36 | |
| 19 | 23 38 37 | | 18 48 48 | | 5 59 5 | | 11 |
| | | 2 8 | | 18 16 | | 31 51 | |
| 20 | 23 36 29 | | 18 30 32 | | 5 27 14 | | 10 |
| | | 2 37 | | 18 49 | | 32 3 | |
| 21 | 23 33 52 | | 18 11 43 | | 4 55 11 | | 9 |
| | | 3 6 | | 19 23 | | 32 16 | |
| 22 | 23 30 46 | | 17 52 20 | | 4 22 55 | | 8 |
| | | 3 35 | | 19 57 | | 32 28 | |
| 23 | 23 27 11 | | 17 32 23 | | 3 50 27- | | 7 |
| | | 4 3 | | 20 31 | | 32 39 | |
| 24 | 23 23 8 | | 17 11 52 | | 3 17 48- | | 6 |
| | | 4 33 | | 21 5 | | 32 46 | |
| 25 | 23 18 35 | | 16 50 47 | | 2 45 2 | | 5 |
| | | 5 4 | | 21 38 | | 32 52 | |
| 26 | 23 13 31- | | 16 29 9 | | 2 12 10 | | 4 |
| | | 5 34 | | 22 10 | | 32 58 | |
| 27 | 23 7 57 | | 16 6 59 | | 1 39 12 | | 3 |
| | | 6 5 | | 22 43 | | 33 2 | |
| 28 | 23 1 52- | | 15 44 16 | | 1 6 11 | | 2 |
| | | 6 35 | | 23 15 | | 33 5 | |
| 29 | 22 55 17 | | 15 21 1- | | 0 33 6 | | 1 |
| | | 7 6 | | 23 47 | | 33 6 | |
| 30 | 22 48 11 | | 14 57 14 | | 0 0 0 | | 0 |
| | Sig. VIII. *Adde.* | *Diff.* | Sig. VII. *Adde.* | *Diff.* | Sig. VI. *Adde.* | *Diff.* | |

# LOGARITHMI DISTANTIARUM MERCURII A SOLE.

*Anomalia media Mercurii.*

| Gr. | Sig. 0. Logar. | Differentia. | Sig. I. Logar. | Differentia. | Sig. II. Logar. | Differentia. | |
|---|---|---|---|---|---|---|---|
| 0 | 4 669131 | | 4 662120 | | 4 640896 | | 30 |
| | | 8 | | 477 | | 956 | |
| 1 | 4 669123 | | 4 661643 | | 4 639940 | | 29 |
| | | 23 | | 492 | | 972 | |
| 2 | 4 669100 | | 4 661151 | | 4 638968 | | 28 |
| | | 39 | | 508 | | 988 | |
| 3 | 4 669061 | | 4 660643 | | 4 637980 | | 27 |
| | | 55 | | 524 | | 1004 | |
| 4 | 4 669006 | | 4 660119 | | 4 636976 | | 26 |
| | | 70 | | 540 | | 1020 | |
| 5 | 4 668936 | | 4 659579 | | 4 635956 | | 25 |
| | | 85 | | 555 | | 1036 | |
| 6 | 4 668851 | | 4 659024 | | 4 634920 | | 24 |
| | | 101 | | 572 | | 1052 | |
| 7 | 4 668750 | | 4 658452 | | 4 633868 | | 23 |
| | | 117 | | 588 | | 1068 | |
| 8 | 4 668633 | | 4 657864 | | 4 632800 | | 22 |
| | | 132 | | 603 | | 1084 | |
| 9 | 4 668501 | | 4 657261 | | 4 631716 | | 21 |
| | | 148 | | 619 | | 1099 | |
| 10 | 4 668353 | | 4 656642 | | 4 630617 | | 20 |
| | | 163 | | 635 | | 1116 | |
| 11 | 4 668190 | | 4 656007 | | 4 629501 | | 19 |
| | | 178 | | 651 | | 1131 | |
| 12 | 4 668012 | | 4 655356 | | 4 628370 | | 18 |
| | | 195 | | 667 | | 1147 | |
| 13 | 4 667817 | | 4 654688 | | 4 627223 | | 17 |
| | | 210 | | 683 | | 1163 | |
| 14 | 4 667607 | | 4 654005 | | 4 626060 | | 16 |
| | | 225 | | 699 | | 1179 | |
| 15 | 4 667382 | | 4 653306 | | 4 624881 | | 15 |
| | | 241 | | 715 | | 1194 | |
| 16 | 4 667141 | | 4 652591 | | 4 623687 | | 14 |
| | | 257 | | 731 | | 1209 | |
| 17 | 4 666884 | | 4 651860 | | 4 622478 | | 13 |
| | | 272 | | 747 | | 1225 | |
| 18 | 4 666612 | | 4 651113 | | 4 621253 | | 12 |
| | | 288 | | 763 | | 1241 | |
| 19 | 4 666324 | | 4 650350 | | 4 620012 | | 11 |
| | | 304 | | 779 | | 1256 | |
| 20 | 4 666020 | | 4 649571 | | 4 618756 | | 10 |
| | | 319 | | 796 | | 1271 | |
| 21 | 4 665701 | | 4 648775 | | 4 617485 | | 9 |
| | | 336 | | 811 | | 1286 | |
| 22 | 4 665365 | | 4 647964 | | 4 616199 | | 8 |
| | | 351 | | 828 | | 1301 | |
| 23 | 4 665014 | | 4 647136 | | 4 614898 | | 7 |
| | | 366 | | 843 | | 1316 | |
| 24 | 4 664648 | | 4 646293 | | 4 613582 | | 6 |
| | | 382 | | 860 | | 1331 | |
| 25 | 4 664266 | | 4 645433 | | 4 612251 | | 5 |
| | | 398 | | 875 | | 1346 | |
| 26 | 4 663868 | | 4 644558 | | 4 610905 | | 4 |
| | | 413 | | 891 | | 1360 | |
| 27 | 4 663455 | | 4 643667 | | 4 609545 | | 3 |
| | | 429 | | 908 | | 1375 | |
| 28 | 4 663026 | | 4 642755 | | 4 608170 | | 2 |
| | | 445 | | 924 | | 1389 | |
| 29 | 4 662581 | | 4 641835 | | 4 606781 | | 1 |
| | | 461 | | 939 | | 1403 | |
| 30 | 4 662120 | | 4 640896 | | 4 605378 | | 0 |
| | Sig. XI. | *Diff.* | Sig. X. | *Diff.* | Sig. IX. | *Diff.* | *Gr.* |

## LOGARITHMI DISTANTIARUM MERCURII A SOLE.

*Anomalia media Mercurii.*

| Gr. | Sig. III. Logar. | Differentia. | Sig. IV. Logar. | Differentia. | Sig. V. Logar. | Differentia. | |
|---|---|---|---|---|---|---|---|
| 0 | 4 605378 | | 4 557951 | | 4 509939 | | 30 |
| | | 1417 | | 1696 | | 1333 | |
| 1 | 4 603961 | | 4 556255 | | 4 508606 | | 29 |
| | | 1431 | | 1698 | | 1304 | |
| 2 | 4 602530 | | 4 554557 | | 4 507302 | | 28 |
| | | 1445 | | 1698 | | 1272 | |
| 3 | 4 601085 | | 4 552859 | | 4 506030 | | 27 |
| | | 1458 | | 1699 | | 1239 | |
| 4 | 4 599627 | | 4 551160 | | 4 504791 | | 26 |
| | | 1472 | | 1698 | | 1205 | |
| 5 | 4 598155 | | 4 549462 | | 4 503586 | | 25 |
| | | 1484 | | 1698 | | 1170 | |
| 6 | 4 596671 | | 4 547764 | | 4 502416 | | 24 |
| | | 1497 | | 1695 | | 1133 | |
| 7 | 4 595174 | | 4 546069 | | 4 501283 | | 23 |
| | | 1510 | | 1692 | | 1097 | |
| 8 | 4 593664 | | 4 544377 | | 4 500186 | | 22 |
| | | 1522 | | 1688 | | 1057 | |
| 9 | 4 592142 | | 4 542689 | | 4 499129 | | 21 |
| | | 1534 | | 1684 | | 1016 | |
| 10 | 4 590608 | | 4 541005 | | 4 498113 | | 20 |
| | | 1546 | | 1677 | | 976 | |
| 11 | 4 589062 | | 4 539328 | | 4 497137 | | 19 |
| | | 1557 | | 1672 | | 933 | |
| 12 | 4 587505 | | 4 537656 | | 4 496204 | | 18 |
| | | 1568 | | 1663 | | 890 | |
| 13 | 4 585937 | | 4 535993 | | 4 495314 | | 17 |
| | | 1579 | | 1655 | | 844 | |
| 14 | 4 584358 | | 4 534338 | | 4 494470 | | 16 |
| | | 1590 | | 1645 | | 799 | |
| 15 | 4 582768 | | 4 532693 | | 4 493671 | | 15 |
| | | 1600 | | 1635 | | 752 | |
| 16 | 4 581168 | | 4 531058 | | 4 492919 | | 14 |
| | | 1610 | | 1623 | | 704 | |
| 17 | 4 579558 | | 4 529435 | | 4 492215 | | 13 |
| | | 1619 | | 1610 | | 658 | |
| 18 | 4 577939 | | 4 527825 | | 4 491557 | | 12 |
| | | 1628 | | 1596 | | 607 | |
| 19 | 4 576311 | | 4 526229 | | 4 490950 | | 11 |
| | | 1636 | | 1581 | | 557 | |
| 20 | 4 574675 | | 4 524648 | | 4 490393 | | 10 |
| | | 1645 | | 1564 | | 506 | |
| 21 | 4 573030 | | 4 523084 | | 4 489887 | | 9 |
| | | 1652 | | 1547 | | 455 | |
| 22 | 4 571378 | | 4 521537 | | 4 489432 | | 8 |
| | | 1659 | | 1528 | | 403 | |
| 23 | 4 569719 | | 4 520009 | | 4 489029 | | 7 |
| | | 1666 | | 1508 | | 350 | |
| 24 | 4 568053 | | 4 518501 | | 4 488679 | | 6 |
| | | 1672 | | 1487 | | 297 | |
| 25 | 4 566381 | | 4 517014 | | 4 488382 | | 5 |
| | | 1677 | | 1466 | | 244 | |
| 26 | 4 564704 | | 4 515548 | | 4 488138 | | 4 |
| | | 1682 | | 1441 | | 190 | |
| 27 | 4 563022 | | 4 514107 | | 4 487948 | | 3 |
| | | 1687 | | 1416 | | 135 | |
| 28 | 4 561335 | | 4 512691 | | 4 487813 | | 2 |
| | | 1690 | | 1390 | | 81 | |
| 29 | 4 559645 | | 4 511301 | | 4 487732 | | 1 |
| | | 1694 | | 1362 | | 28 | |
| 30 | 4 557951 | | 4 509939 | | 4 487704 | | 0 |
| | Sig. VIII. | Diff. | Sig. VII. | Diff. | Sig. VI | Diff. | Gr. |

# TABVLA LATITVDINARIA MERCVRII.

| Argument. Latitudinis. | Sig. 0. Bor. / Sig. 6. Aust. Inclinatio. | | | Subtr. / Subtr. Reduct. | | Curtatio | Sig. 1. Bor. / Sig. 7. Aust. Inclinatio. | | | Subtr. / Subtr. Reduct. | | Curtatio. | Sig. 2. Bor. / Sig. 8. Aust. Inclinatio. | | | Subtr. / Subtr. Reduct. | | Curtatio. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gr. | ° | ′ | ″ | ′ | ″ | Log. | ° | ′ | ″ | ′ | ″ | Log. | ° | ′ | ″ | ′ | ″ | Log. | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 29 | 17 | 11 | 5 | 805 | 6 | 2 | 56 | 11 | 7 | 2425 | 30 |
| 1 | 0 | 7 | 18 | 0 | 27 | 1 | 3 | 35 | 35 | 11 | 18 | 855 | 6 | 6 | 32 | 10 | 54 | 2473 | 29 |
| 2 | 0 | 14 | 36 | 0 | 53 | 4 | 3 | 41 | 49 | 11 | 30 | 905 | 6 | 10 | 2 | 10 | 39 | 2521 | 28 |
| 3 | 0 | 21 | 54 | 1 | 20 | 9 | 3 | 47 | 59 | 11 | 42 | 956 | 6 | 13 | 26 | 10 | 24 | 2567 | 27 |
| 4 | 0 | 29 | 11 | 1 | 47 | 16 | 3 | 54 | 5 | 11 | 52 | 1008 | 6 | 16 | 43 | 10 | 7 | 2613 | 26 |
| 5 | 0 | 36 | 27 | 2 | 13 | 24 | 4 | 0 | 7 | 12 | 2 | 1060 | 6 | 19 | 52 | 9 | 51 | 2657 | 25 |
| 6 | 0 | 43 | 43 | 2 | 39 | 35 | 4 | 6 | 4 | 12 | 11 | 1114 | 6 | 22 | 55 | 9 | 33 | 2700 | 24 |
| 7 | 0 | 50 | 59 | 3 | 5 | 48 | 4 | 11 | 58 | 12 | 19 | 1168 | 6 | 25 | 51 | 9 | 15 | 2741 | 23 |
| 8 | 0 | 58 | 13 | 3 | 31 | 62 | 4 | 17 | 46 | 12 | 26 | 1222 | 6 | 28 | 40 | 8 | 56 | 2781 | 22 |
| 9 | 1 | 5 | 26 | 3 | 57 | 79 | 4 | 23 | 30 | 12 | 32 | 1277 | 6 | 31 | 21 | 8 | 36 | 2820 | 21 |
| 10 | 1 | 12 | 38 | 4 | 22 | 97 | 4 | 29 | 9 | 12 | 37 | 1333 | 6 | 33 | 56 | 8 | 16 | 2858 | 20 |
| 11 | 1 | 19 | 49 | 4 | 47 | 117 | 4 | 34 | 43 | 12 | 41 | 1388 | 6 | 36 | 23 | 7 | 55 | 2894 | 19 |
| 12 | 1 | 26 | 58 | 5 | 12 | 139 | 4 | 40 | 12 | 12 | 45 | 1444 | 6 | 38 | 43 | 7 | 33 | 2928 | 18 |
| 13 | 1 | 34 | 6 | 5 | 36 | 163 | 4 | 45 | 36 | 12 | 47 | 1501 | 6 | 40 | 55 | 7 | 11 | 2960 | 17 |
| 14 | 1 | 41 | 12 | 6 | 0 | 188 | 4 | 50 | 55 | 12 | 48 | 1557 | 6 | 43 | 1 | 6 | 49 | 2991 | 16 |
| 15 | 1 | 48 | 17 | 6 | 23 | 215 | 4 | 56 | 9 | 12 | 49 | 1614 | 6 | 44 | 58 | 6 | 26 | 3021 | 15 |
| 16 | 1 | 55 | 19 | 6 | 46 | 244 | 5 | 1 | 17 | 12 | 48 | 1670 | 6 | 46 | 49 | 6 | 2 | 3048 | 14 |
| 17 | 2 | 2 | 19 | 7 | 9 | 275 | 5 | 6 | 19 | 12 | 47 | 1726 | 6 | 48 | 32 | 5 | 38 | 3074 | 13 |
| 18 | 2 | 9 | 17 | 7 | 31 | 307 | 5 | 11 | 16 | 12 | 45 | 1783 | 6 | 50 | 7 | 5 | 14 | 3098 | 12 |
| 19 | 2 | 16 | 13 | 7 | 52 | 341 | 5 | 16 | 8 | 12 | 42 | 1839 | 6 | 51 | 35 | 4 | 49 | 3120 | 11 |
| 20 | 2 | 23 | 6 | 8 | 13 | 376 | 5 | 20 | 54 | 12 | 38 | 1895 | 6 | 52 | 56 | 4 | 24 | 3141 | 10 |
| 21 | 2 | 29 | 57 | 8 | 33 | 413 | 5 | 25 | 34 | 12 | 33 | 1951 | 6 | 54 | 9 | 3 | 58 | 3159 | 9 |
| 22 | 2 | 36 | 45 | 8 | 53 | 452 | 5 | 30 | 7 | 12 | 27 | 2006 | 6 | 55 | 14 | 3 | 33 | 3176 | 8 |
| 23 | 2 | 43 | 30 | 9 | 12 | 491 | 5 | 34 | 35 | 12 | 20 | 2060 | 6 | 56 | 11 | 3 | 7 | 3191 | 7 |
| 24 | 2 | 50 | 12 | 9 | 30 | 532 | 5 | 38 | 57 | 12 | 12 | 2114 | 6 | 57 | 1 | 2 | 40 | 3203 | 6 |
| 25 | 2 | 56 | 51 | 9 | 48 | 575 | 5 | 43 | 13 | 12 | 3 | 2167 | 6 | 57 | 44 | 2 | 14 | 3214 | 5 |
| 26 | 3 | 3 | 27 | 10 | 5 | 619 | 5 | 47 | 22 | 11 | 54 | 2220 | 6 | 58 | 18 | 1 | 47 | 3223 | 4 |
| 27 | 3 | 10 | 0 | 10 | 21 | 664 | 5 | 51 | 25 | 11 | 44 | 2273 | 6 | 58 | 45 | 1 | 21 | 3230 | 3 |
| 28 | 3 | 16 | 29 | 10 | 36 | 710 | 5 | 55 | 22 | 11 | 33 | 2325 | 6 | 59 | 4 | 0 | 54 | 3235 | 2 |
| 29 | 3 | 22 | 55 | 10 | 51 | 757 | 5 | 59 | 12 | 11 | 20 | 2375 | 6 | 59 | 16 | 0 | 27 | 3238 | 1 |
| 30 | 3 | 29 | 17 | 11 | 5 | 805 | 6 | 2 | 56 | 11 | 7 | 2425 | 6 | 59 | 20 | 0 | 0 | 3239 | 0 |
| | Sig. 11. Aust. / Sig. 5. Bor. | | | Adde. / Adde. | | | Sig. 10. Aust. / Sig. 4. Bor. | | | Adde. / Adde. | | | Sig. 9. Aust. / Sig. 3. Bor. | | | Adde. / Adde. | | | Gr. |

## EPOCHÆ MEDIORUM MOTUUM VENERIS.

| Annis Julianis ineuntibus. | Venus ab Æquinoct. s | ° | ′ | ″ | Aphel. ♀ ♒ 5° ° | ′ | ″ | Nod. ♀ ♊ 13° ′ | ″ |
|---|---|---|---|---|---|---|---|---|---|
| 1661 | 6 | 2 | 16 | 18 | 54 | 47 | | 37 | 44 |
| 62 | 1 | 17 | 3 | 47 | 55 | 44 | | 38 | 15 |
| 63 | 9 | 1 | 51 | 16 | 56 | 40 | | 38 | 46 |
| 64 | 4 | 16 | 38 | 45 | 57 | 36 | | 39 | 17 |
| 1665 | 0 | 3 | 2 | 22 | 58 | 33 | | 39 | 48 |
| 1666 | 7 | 17 | 49 | 52 | 59 | 29 | | 40 | 19 |
| 67 | 3 | 2 | 37 | 21 | 6 | 0 | 26 | 40 | 50 |
| 68 | 10 | 17 | 24 | 50 | 1 | 22 | | 41 | 21 |
| 69 | 6 | 3 | 48 | 27 | 2 | 19 | | 41 | 52 |
| 1670 | 1 | 18 | 35 | 56 | 3 | 15 | | 42 | 23 |
| 1671 | 9 | 3 | 23 | 25 | 4 | 11 | | 42 | 54 |
| 72 | 4 | 18 | 10 | 54 | 5 | 8 | | 43 | 25 |
| 73 | 0 | 4 | 34 | 31 | 6 | 5 | | 43 | 56 |
| 74 | 7 | 19 | 22 | 1 | 7 | 1 | | 44 | 27 |
| 1675 | 3 | 4 | 9 | 30 | 7 | 57 | | 44 | 58 |
| 1676 | 10 | 18 | 56 | 59 | 8 | 54 | | 45 | 29 |
| 77 | 6 | 5 | 20 | 36 | 9 | 50 | | 46 | 0 |
| 78 | 1 | 20 | 8 | 5 | 10 | 47 | | 46 | 31 |
| 79 | 9 | 4 | 55 | 34 | 11 | 44 | | 47 | 2 |
| 1680 | 4 | 19 | 43 | 3 | 12 | 40 | | 47 | 33 |
| 1681 | 0 | 6 | 6 | 40 | 13 | 36 | | 48 | 4 |
| 82 | 7 | 20 | 54 | 10 | 14 | 33 | | 48 | 35 |
| 83 | 3 | 5 | 41 | 39 | 15 | 29 | | 49 | 6 |
| 84 | 10 | 20 | 29 | 8 | 16 | 26 | | 49 | 37 |
| 1685 | 6 | 6 | 52 | 45 | 17 | 22 | | 50 | 8 |
| 1686 | 1 | 21 | 40 | 14 | 18 | 19 | | 50 | 39 |
| 87 | 9 | 6 | 27 | 43 | 19 | 15 | | 51 | 10 |
| 88 | 4 | 21 | 15 | 12 | 20 | 12 | | 51 | 41 |
| 89 | 0 | 7 | 38 | 49 | 21 | 8 | | 52 | 12 |
| 1690 | 7 | 22 | 26 | 18 | 22 | 5 | | 52 | 43 |
| 1691 | 3 | 7 | 13 | 48 | 23 | 1 | | 53 | 14 |
| 92 | 10 | 22 | 1 | 17 | 23 | 58 | | 53 | 45 |
| 93 | 6 | 8 | 24 | 54 | 24 | 54 | | 54 | 16 |
| 94 | 1 | 23 | 12 | 23 | 25 | 50 | | 54 | 47 |
| 1695 | 9 | 7 | 59 | 52 | 26 | 47 | | 55 | 18 |

| Annis Julianis ineuntibus. | Venus ab Æquinoct. s | ° | ′ | ″ | Aph. ♀ ♒ 6° ′ | ″ | Nodus ♀ ♊ 13° ° | ′ | ″ |
|---|---|---|---|---|---|---|---|---|---|
| 1696 | 4 | 22 | 47 | 21 | 27 | 44 | | 55 | 49 |
| 97 | 0 | 9 | 10 | 58 | 28 | 40 | | 56 | 20 |
| 98 | 7 | 23 | 58 | 27 | 29 | 37 | | 56 | 51 |
| 99 | 3 | 8 | 45 | 57 | 30 | 33 | | 57 | 22 |
| 1700 | 10 | 23 | 33 | 26 | 31 | 29 | | 57 | 53 |
| 1701 | 6 | 9 | 57 | 3 | 32 | 26 | | 58 | 24 |
| 2 | 1 | 24 | 44 | 32 | 33 | 22 | | 58 | 55 |
| 3 | 9 | 9 | 32 | 1 | 34 | 19 | | 59 | 26 |
| 4 | 4 | 24 | 19 | 30 | 35 | 15 | | 59 | 57 |
| 1705 | 0 | 10 | 43 | 7 | 36 | 11 | 14 | 0 | 28 |
| 1706 | 7 | 25 | 30 | 36 | 37 | 8 | | 0 | 59 |
| 7 | 3 | 10 | 18 | 6 | 38 | 5 | | 1 | 30 |
| 8 | 10 | 25 | 5 | 35 | 39 | 1 | | 2 | 1 |
| 9 | 6 | 11 | 29 | 12 | 39 | 58 | | 2 | 32 |
| 1710 | 1 | 26 | 16 | 41 | 40 | 54 | | 3 | 3 |
| 1711 | 9 | 11 | 4 | 10 | 41 | 50 | | 3 | 34 |
| 12 | 4 | 25 | 51 | 39 | 42 | 47 | | 4 | 5 |
| 13 | 0 | 12 | 15 | 16 | 43 | 44 | | 4 | 36 |
| 14 | 7 | 27 | 2 | 45 | 44 | 40 | | 5 | 7 |
| 1715 | 3 | 11 | 50 | 15 | 45 | 37 | | 5 | 38 |
| 1716 | 10 | 26 | 37 | 44 | 46 | 33 | | 6 | 9 |
| 17 | 6 | 13 | 1 | 21 | 47 | 29 | | 6 | 40 |
| 18 | 1 | 27 | 48 | 50 | 48 | 26 | | 7 | 11 |
| 19 | 9 | 12 | 36 | 19 | 49 | 22 | | 7 | 42 |
| 1720 | 4 | 27 | 23 | 48 | 50 | 19 | | 8 | 13 |
| 1721 | 0 | 13 | 47 | 25 | 51 | 15 | | 8 | 44 |
| 22 | 7 | 28 | 34 | 54 | 52 | 11 | | 9 | 15 |
| 23 | 3 | 13 | 22 | 24 | 53 | 8 | | 9 | 46 |
| 24 | 10 | 28 | 9 | 53 | 54 | 5 | 10 | 10 | 17 |
| 1725 | 6 | 14 | 33 | 30 | 55 | 1 | 10 | 48 | |
| 1726 | 1 | 29 | 20 | 59 | 55 | 58 | | 11 | 19 |
| 27 | 9 | 14 | 8 | 28 | 56 | 54 | | 11 | 50 |
| 28 | 4 | 28 | 55 | 57 | 57 | 50 | | 12 | 21 |
| 29 | 0 | 15 | 19 | 34 | 58 | 47 | | 12 | 52 |
| 1730 | 8 | 0 | 7 | 3 | 59 | 44 | | 13 | 23 |

# EPOCHÆ MEDIORUM MOTUUM VENERIS.

| Annis Juli-anis ineun-tibus. | Venus ab Æquinoct. | Aphel. ♀ ♒ 7° | Nod. ♀ ♊ 14° |
|---|---|---|---|
| | s o ′ ″ | o ′ ″ | ′ ″ |
| 1731 | 3 14 54 32 | 7 0 40 | 13 54 |
| 32 | 10 29 42 2 | 1 36 | 14 25 |
| 33 | 6 16 5 39 | 2 33 | 14 56 |
| 34 | 2 0 53 8 | 3 29 | 15 27 |
| 1735 | 9 15 40 37 | 4 26 | 15 58 |
| 1736 | 5 0 28 6 | 5 22 | 16 29 |
| 37 | 0 16 51 43 | 6 19 | 17 0 |
| 38 | 8 1 39 12 | 7 15 | 17 31 |
| 39 | 3 16 26 41 | 8 12 | 18 2 |
| 1740 | 11 1 14 11 | 9 8 | 18 33 |
| 1741 | 6 17 37 48 | 10 5 | 19 4 |
| 42 | 2 2 25 17 | 11 2 | 19 35 |
| 43 | 9 17 12 46 | 11 58 | 20 6 |
| 44 | 5 2 0 15 | 12 55 | 20 37 |
| 1745 | 0 18 23 52 | 13 51 | 21 8 |
| 1746 | 8 3 11 21 | 14 48 | 21 39 |
| 47 | 3 17 58 50 | 15 44 | 22 10 |
| 48 | 11 2 46 20 | 16 40 | 22 41 |
| 49 | 6 19 9 57 | 17 36 | 23 12 |
| 1750 | 2 3 57 26 | 18 33 | 23 43 |
| 1751 | 9 18 44 55 | 19 29 | 24 14 |
| 52 | 5 3 32 24 | 20 26 | 24 45 |
| 53 | 0 19 56 1 | 21 22 | 25 16 |
| 54 | 8 4 43 30 | 22 19 | 25 47 |
| 1755 | 3 19 30 59 | 23 15 | 26 18 |
| 1756 | 11 4 18 28 | 24 12 | 26 49 |
| 57 | 6 20 42 5 | 25 8 | 27 20 |
| 58 | 2 5 29 35 | 26 5 | 27 51 |
| 59 | 9 20 17 4 | 27 2 | 28 22 |
| 1760 | 5 5 4 33 | 27 58 | 28 53 |
| 1761 | 0 21 28 10 | 28 55 | 29 24 |
| 62 | 8 6 15 39 | 29 51 | 29 55 |
| 63 | 3 21 3 8 | 30 48 | 30 26 |
| 64 | 11 5 50 37 | 31 44 | 30 57 |
| 1765 | 6 22 14 14 | 32 40 | 31 28 |

| Annis Juli-anis ineun-tibus. | Venus ab Æquinoct. | Aphel. ♀ ♒ 7° | Nod. ♀ ♊ 14° |
|---|---|---|---|
| | s o ′ ″ | o ′ ″ | ′ ″ |
| 1766 | 2 7 1 44 | 33 36 | 31 59 |
| 67 | 9 21 49 13 | 34 33 | 32 30 |
| 68 | 5 6 36 42 | 35 29 | 33 1 |
| 69 | 0 23 0 19 | 36 26 | 33 32 |
| 1770 | 8 7 47 48 | 37 22 | 34 3 |
| 1771 | 3 22 35 17 | 38 19 | 34 34 |
| 72 | 11 7 22 46 | 39 15 | 35 5 |
| 73 | 6 23 46 23 | 40 12 | 35 36 |
| 74 | 2 8 33 53 | 41 8 | 36 7 |
| 1775 | 9 23 21 22 | 42 5 | 36 38 |
| 1776 | 5 8 8 51 | 43 2 | 37 9 |
| 77 | 0 24 32 28 | 43 58 | 37 40 |
| 78 | 8 9 19 57 | 44 55 | 38 11 |
| 79 | 3 24 7 26 | 45 51 | 38 42 |
| 1780 | 11 8 54 55 | 46 48 | 39 13 |
| 1781 | 6 25 18 32 | 47 44 | 39 44 |
| 82 | 2 10 6 1 | 48 40 | 40 15 |
| 83 | 9 24 53 31 | 49 36 | 40 46 |
| 84 | 5 9 41 0 | 50 33 | 41 17 |
| 1785 | 0 26 4 37 | 51 29 | 41 48 |
| 1786 | 8 10 52 6 | 52 26 | 42 19 |
| 87 | 3 25 39 35 | 53 22 | 42 50 |
| 88 | 11 10 27 4 | 54 19 | 43 21 |
| 89 | 6 26 50 41 | 55 15 | 43 52 |
| 1790 | 2 11 38 10 | 56 12 | 44 23 |
| 1791 | 9 26 25 40 | 57 8 | 44 54 |
| 92 | 5 11 13 9 | 58 5 | 45 25 |
| 93 | 0 27 36 46 | 59 2 | 45 56 |
| 94 | 8 12 24 15 | 59 58 | 46 27 |
| 1795 | 3 27 11 44 | 8 0 55 | 46 58 |
| 1796 | 11 11 59 13 | 1 51 | 47 29 |
| 97 | 6 28 22 50 | 2 48 | 48 0 |
| 98 | 2 13 10 19 | 3 44 | 48 31 |
| 99 | 9 27 57 49 | 4 40 | 49 2 |
| 1800 | 5 12 45 18 | 5 36 | 49 33 |

# *MEDIUS MOTUS VENERIS AD DIES MENSIUM.*

| *Die Mensis.* | JANUARII *Medius Motus Veneris.* | | | | FEBRUARII *Medius Motus Veneris.* | | | | MARTII *Medius Motus Veneris.* | | | | APRILIS *Medius Motus Veneris.* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* |
| 1 | 0 | 1 | 36 | 8 | 1 | 21 | 16 | 10 | 3 | 6 | 7 | 48 | 4 | 25 | 47 | 50 |
| 2 | 0 | 3 | 12 | 16 | 1 | 22 | 52 | 17 | 3 | 7 | 43 | 56 | 4 | 27 | 23 | 58 |
| 3 | 0 | 4 | 48 | 23 | 1 | 24 | 28 | 25 | 3 | 9 | 20 | 4 | 4 | 29 | 0 | 6 |
| 4 | 0 | 6 | 24 | 31 | 1 | 26 | 4 | 33 | 3 | 10 | 56 | 12 | 5 | 0 | 36 | 13 |
| 5 | 0 | 8 | 0 | 39 | 1 | 27 | 40 | 41 | 3 | 12 | 32 | 19 | 5 | 2 | 12 | 21 |
| 6 | 0 | 9 | 36 | 47 | 1 | 29 | 16 | 49 | 3 | 14 | 8 | 27 | 5 | 3 | 48 | 29 |
| 7 | 0 | 11 | 12 | 55 | 2 | 0 | 52 | 56 | 3 | 15 | 44 | 35 | 5 | 5 | 24 | 37 |
| 8 | 0 | 12 | 49 | 2 | 2 | 2 | 29 | 4 | 3 | 17 | 20 | 43 | 5 | 7 | 0 | 45 |
| 9 | 0 | 14 | 25 | 10 | 2 | 4 | 5 | 12 | 3 | 18 | 56 | 51 | 5 | 8 | 36 | 52 |
| 10 | 0 | 16 | 1 | 18 | 2 | 5 | 41 | 20 | 3 | 20 | 32 | 58 | 5 | 10 | 13 | 0 |
| 11 | 0 | 17 | 37 | 26 | 2 | 7 | 17 | 28 | 3 | 22 | 9 | 6 | 5 | 11 | 49 | 8 |
| 12 | 0 | 19 | 13 | 34 | 2 | 8 | 53 | 36 | 3 | 23 | 45 | 14 | 5 | 13 | 25 | 16 |
| 13 | 0 | 20 | 49 | 41 | 2 | 10 | 29 | 43 | 3 | 25 | 21 | 22 | 5 | 15 | 1 | 24 |
| 14 | 0 | 22 | 25 | 49 | 2 | 12 | 5 | 51 | 3 | 26 | 57 | 30 | 5 | 16 | 37 | 31 |
| 15 | 0 | 24 | 1 | 57 | 2 | 13 | 41 | 59 | 3 | 28 | 33 | 37 | 5 | 18 | 13 | 39 |
| 16 | 0 | 25 | 38 | 5 | 2 | 15 | 18 | 7 | 4 | 0 | 9 | 45 | 5 | 19 | 49 | 47 |
| 17 | 0 | 27 | 14 | 13 | 2 | 16 | 54 | 15 | 4 | 1 | 45 | 53 | 5 | 21 | 25 | 55 |
| 18 | 0 | 28 | 50 | 20 | 2 | 18 | 30 | 22 | 4 | 3 | 22 | 1 | 5 | 23 | 2 | 3 |
| 19 | 1 | 0 | 26 | 28 | 2 | 20 | 6 | 30 | 4 | 4 | 58 | 9 | 5 | 24 | 38 | 10 |
| 20 | 1 | 2 | 2 | 36 | 2 | 21 | 42 | 38 | 4 | 6 | 34 | 16 | 5 | 26 | 14 | 18 |
| 21 | 1 | 3 | 38 | 44 | 2 | 23 | 18 | 46 | 4 | 8 | 10 | 24 | 5 | 27 | 50 | 26 |
| 22 | 1 | 5 | 14 | 52 | 2 | 24 | 54 | 54 | 4 | 9 | 46 | 32 | 5 | 29 | 26 | 34 |
| 23 | 1 | 6 | 50 | 59 | 2 | 26 | 31 | 1 | 4 | 11 | 22 | 40 | 6 | 1 | 2 | 42 |
| 24 | 1 | 8 | 27 | 7 | 2 | 28 | 7 | 9 | 4 | 12 | 58 | 48 | 6 | 2 | 38 | 49 |
| 25 | 1 | 10 | 3 | 15 | 2 | 29 | 43 | 17 | 4 | 14 | 34 | 55 | 6 | 4 | 14 | 57 |
| 26 | 1 | 11 | 39 | 23 | 3 | 1 | 19 | 25 | 4 | 16 | 11 | 3 | 6 | 5 | 51 | 5 |
| 27 | 1 | 13 | 15 | 31 | 3 | 2 | 55 | 33 | 4 | 17 | 47 | 11 | 6 | 7 | 27 | 13 |
| 28 | 1 | 14 | 51 | 38 | 3 | 4 | 31 | 40 | 4 | 19 | 23 | 19 | 6 | 9 | 3 | 21 |
| 29 | 1 | 16 | 27 | 46 | *In Anno* Biſſextili *poſt* Februarium *adde unius diei motum.* | | | | 4 | 20 | 59 | 27 | 6 | 10 | 39 | 28 |
| 30 | 1 | 18 | 3 | 54 | | | | | 4 | 22 | 35 | 34 | 6 | 12 | 15 | 36 |
| 31 | 1 | 19 | 40 | 2 | | | ' | '' | 4 | 24 | 11 | 42 | | | ' | '' |
| | *Mot. Aph.* | 0 | | 5 | | | 0 | 9 | | | 0 | 14 | | | 0 | 19 |
| | *Mot. Nod.* | 0 | | 3 | | | 0 | 5 | | | 0 | 8 | | | 0 | 11 |

## *MEDIUS MOTUS VENERIS AD DIES MENSIUM.*

| Die Mensis. | MAII | | | | JUNII | | | | JULII | | | | AUGUSTI | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Medius Motus Veneris.* | | | | *Medius Motus Veneris.* | | | | *Medius Motus Veneris.* | | | | *Medius Motus Veneris.* | | | |
| | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* |
| 1 | 6 | 13 | 51 | 44 | 8 | 3 | 31 | 46 | 9 | 21 | 35 | 40 | 11 | 11 | 15 | 42 |
| 2 | 6 | 15 | 27 | 52 | 8 | 5 | 7 | 54 | 9 | 23 | 11 | 48 | 11 | 12 | 51 | 50 |
| 3 | 6 | 17 | 4 | 0 | 8 | 6 | 44 | 2 | 9 | 24 | 47 | 56 | 11 | 14 | 27 | 58 |
| 4 | 6 | 18 | 40 | 8 | 8 | 8 | 20 | 9 | 9 | 26 | 24 | 3 | 11 | 16 | 4 | 5 |
| 5 | 6 | 20 | 16 | 15 | 8 | 9 | 56 | 17 | 9 | 28 | 0 | 11 | 11 | 17 | 40 | 13 |
| 6 | 6 | 21 | 52 | 23 | 8 | 11 | 32 | 25 | 9 | 29 | 36 | 19 | 11 | 19 | 16 | 21 |
| 7 | 6 | 23 | 28 | 31 | 8 | 13 | 8 | 33 | 10 | 1 | 12 | 27 | 11 | 20 | 52 | 29 |
| 8 | 6 | 25 | 4 | 39 | 8 | 14 | 44 | 41 | 10 | 2 | 48 | 35 | 11 | 22 | 28 | 37 |
| 9 | 6 | 26 | 40 | 47 | 8 | 16 | 20 | 48 | 10 | 4 | 24 | 43 | 11 | 24 | 4 | 44 |
| 10 | 6 | 28 | 16 | 54 | 8 | 17 | 56 | 56 | 10 | 6 | 0 | 50 | 11 | 25 | 40 | 52 |
| 11 | 6 | 29 | 53 | 2 | 8 | 19 | 33 | 4 | 10 | 7 | 36 | 58 | 11 | 27 | 17 | 0 |
| 12 | 7 | 1 | 29 | 10 | 8 | 21 | 9 | 12 | 10 | 9 | 13 | 6 | 11 | 28 | 53 | 8 |
| 13 | 7 | 3 | 5 | 18 | 8 | 22 | 45 | 20 | 10 | 10 | 49 | 14 | 0 | 0 | 29 | 16 |
| 14 | 7 | 4 | 41 | 26 | 8 | 24 | 21 | 27 | 10 | 12 | 25 | 22 | 0 | 2 | 5 | 23 |
| 15 | 7 | 6 | 17 | 33 | 8 | 25 | 57 | 35 | 10 | 14 | 1 | 29 | 0 | 3 | 41 | 31 |
| 16 | 7 | 7 | 53 | 41 | 8 | 27 | 33 | 43 | 10 | 15 | 37 | 37 | 0 | 5 | 17 | 39 |
| 17 | 7 | 9 | 29 | 49 | 8 | 29 | 9 | 51 | 10 | 17 | 13 | 45 | 0 | 6 | 53 | 47 |
| 18 | 7 | 11 | 5 | 57 | 9 | 0 | 45 | 59 | 10 | 18 | 49 | 53 | 0 | 8 | 29 | 55 |
| 19 | 7 | 12 | 42 | 5 | 9 | 2 | 22 | 6 | 10 | 20 | 26 | 1 | 0 | 10 | 6 | 2 |
| 20 | 7 | 14 | 18 | 12 | 9 | 3 | 58 | 14 | 10 | 22 | 2 | 8 | 0 | 11 | 42 | 10 |
| 21 | 7 | 15 | 54 | 20 | 9 | 5 | 34 | 22 | 10 | 23 | 38 | 16 | 0 | 13 | 18 | 18 |
| 22 | 7 | 17 | 30 | 28 | 9 | 7 | 10 | 30 | 10 | 25 | 14 | 24 | 0 | 14 | 54 | 26 |
| 23 | 7 | 19 | 6 | 36 | 9 | 8 | 46 | 38 | 10 | 26 | 50 | 32 | 0 | 16 | 30 | 34 |
| 24 | 7 | 20 | 42 | 44 | 9 | 10 | 22 | 45 | 10 | 28 | 26 | 40 | 0 | 18 | 6 | 41 |
| 25 | 7 | 22 | 18 | 51 | 9 | 11 | 58 | 53 | 11 | 0 | 2 | 47 | 0 | 19 | 42 | 49 |
| 26 | 7 | 23 | 54 | 59 | 9 | 13 | 35 | 1 | 11 | 1 | 38 | 55 | 0 | 21 | 18 | 57 |
| 27 | 7 | 25 | 31 | 7 | 9 | 15 | 11 | 9 | 11 | 3 | 15 | 3 | 0 | 22 | 55 | 5 |
| 28 | 7 | 27 | 7 | 15 | 9 | 16 | 47 | 17 | 11 | 4 | 51 | 11 | 0 | 24 | 31 | 13 |
| 29 | 7 | 28 | 43 | 23 | 9 | 18 | 23 | 24 | 11 | 6 | 27 | 19 | 0 | 26 | 7 | 20 |
| 30 | 8 | 0 | 19 | 30 | 9 | 19 | 59 | 32 | 11 | 8 | 3 | 26 | 0 | 27 | 43 | 28 |
| 31 | 8 | 1 | 55 | 38 | | | | | 11 | 9 | 39 | 34 | 0 | 29 | 19 | 36 |
| | *Mot. Aph.* | 0 | | 23 | | | 0 | 28 | | | 0 | 32 | | | 0 | 37 |
| | *Mot. Nod.* | 0 | | 13 | | | 0 | 15 | | | 0 | 18 | | | 0 | 21 |

## MEDIUS MOTUS VENERIS AD DIES MENSIUM.

| Die Mensis. | SEPTEMB. Medius Motus Veneris. | | | | OCTOBRIS Medius Motus Veneris. | | | | NOVEMB. Medius Motus Veneris. | | | | DECEMB. Medius Motus Veneris. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ |
| 1 | 1 | 0 | 55 | 44 | 2 | 18 | 59 | 38 | 4 | 8 | 39 | 40 | 5 | 26 | 43 | 34 |
| 2 | 1 | 2 | 31 | 52 | 2 | 20 | 35 | 46 | 4 | 10 | 15 | 48 | 5 | 28 | 19 | 42 |
| 3 | 1 | 4 | 7 | 59 | 2 | 22 | 11 | 54 | 4 | 11 | 51 | 55 | 5 | 29 | 55 | 50 |
| 4 | 1 | 5 | 44 | 7 | 2 | 23 | 48 | 1 | 4 | 13 | 28 | 3 | 6 | 1 | 31 | 57 |
| 5 | 1 | 7 | 20 | 15 | 2 | 25 | 24 | 9 | 4 | 15 | 4 | 11 | 6 | 3 | 8 | 5 |
| 6 | 1 | 8 | 56 | 23 | 2 | 27 | 0 | 17 | 4 | 16 | 40 | 19 | 6 | 4 | 44 | 13 |
| 7 | 1 | 10 | 32 | 31 | 2 | 28 | 36 | 25 | 4 | 18 | 16 | 27 | 6 | 6 | 20 | 21 |
| 8 | 1 | 12 | 8 | 38 | 3 | 0 | 12 | 33 | 4 | 19 | 52 | 34 | 6 | 7 | 56 | 29 |
| 9 | 1 | 13 | 44 | 46 | 3 | 1 | 48 | 40 | 4 | 21 | 28 | 42 | 6 | 9 | 32 | 36 |
| 10 | 1 | 15 | 20 | 54 | 3 | 3 | 24 | 48 | 4 | 23 | 4 | 50 | 6 | 11 | 8 | 44 |
| 11 | 1 | 16 | 57 | 2 | 3 | 5 | 0 | 56 | 4 | 24 | 40 | 58 | 6 | 12 | 44 | 52 |
| 12 | 1 | 18 | 33 | 10 | 3 | 6 | 37 | 4 | 4 | 26 | 17 | 6 | 6 | 14 | 21 | 0 |
| 13 | 1 | 20 | 9 | 18 | 3 | 8 | 13 | 12 | 4 | 27 | 53 | 13 | 6 | 15 | 57 | 8 |
| 14 | 1 | 21 | 45 | 25 | 3 | 9 | 49 | 19 | 4 | 29 | 29 | 21 | 6 | 17 | 33 | 15 |
| 15 | 1 | 23 | 21 | 33 | 3 | 11 | 25 | 27 | 5 | 1 | 5 | 29 | 6 | 19 | 9 | 23 |
| 16 | 1 | 24 | 57 | 41 | 3 | 13 | 1 | 35 | 5 | 2 | 41 | 37 | 6 | 20 | 45 | 31 |
| 17 | 1 | 26 | 33 | 49 | 3 | 14 | 37 | 43 | 5 | 4 | 17 | 45 | 6 | 22 | 21 | 39 |
| 18 | 1 | 28 | 9 | 57 | 3 | 16 | 13 | 51 | 5 | 5 | 53 | 52 | 6 | 23 | 57 | 47 |
| 19 | 1 | 29 | 46 | 4 | 3 | 17 | 49 | 58 | 5 | 7 | 30 | 0 | 6 | 25 | 33 | 54 |
| 20 | 2 | 1 | 22 | 12 | 3 | 19 | 26 | 6 | 5 | 9 | 6 | 8 | 6 | 27 | 10 | 2 |
| 21 | 2 | 2 | 58 | 20 | 3 | 21 | 2 | 14 | 5 | 10 | 42 | 16 | 6 | 28 | 46 | 10 |
| 22 | 2 | 4 | 34 | 28 | 3 | 22 | 38 | 22 | 5 | 12 | 18 | 24 | 7 | 0 | 22 | 18 |
| 23 | 2 | 6 | 10 | 36 | 3 | 24 | 14 | 30 | 5 | 13 | 54 | 32 | 7 | 1 | 58 | 26 |
| 24 | 2 | 7 | 46 | 43 | 3 | 25 | 50 | 37 | 5 | 15 | 30 | 39 | 7 | 3 | 34 | 33 |
| 25 | 2 | 9 | 22 | 51 | 3 | 27 | 26 | 45 | 5 | 17 | 6 | 47 | 7 | 5 | 10 | 41 |
| 26 | 2 | 10 | 58 | 59 | 3 | 29 | 2 | 53 | 5 | 18 | 42 | 55 | 7 | 6 | 46 | 49 |
| 27 | 2 | 12 | 35 | 7 | 4 | 0 | 39 | 1 | 5 | 20 | 19 | 3 | 7 | 8 | 22 | 57 |
| 28 | 2 | 14 | 11 | 15 | 4 | 2 | 15 | 9 | 5 | 21 | 55 | 11 | 7 | 9 | 59 | 5 |
| 29 | 2 | 15 | 47 | 22 | 4 | 3 | 51 | 16 | 5 | 23 | 31 | 18 | 7 | 11 | 35 | 12 |
| 30 | 2 | 17 | 23 | 30 | 4 | 5 | 27 | 24 | 5 | 25 | 7 | 26 | 7 | 13 | 11 | 20 |
| 31 | | | ′ | ″ | 4 | 7 | 3 | 32 | | | ′ | ″ | 7 | 14 | 47 | 28 |
| | *Mot. Aph.* | o | | 42 | | | o | 47 | | | o | 52 | | | o | 56 |
| | *Mot. Nod.* | o | | 23 | | | o | 26 | | | o | 28 | | | o | 31 |

# *MEDIUS MOTUS VENERIS AB ÆQUINOCTIO.*

## *IN ANNORUM CENTURIIS.*

| *Annis Julian. Collect.* | *Medius Motus Veneris.* S | o | ′ | ″ | *Motus Aphel. Veneris.* S | o | ′ | ″ | *Motus Nodi Veneris.* o | ′ | ″ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 6 | 19 | 11 | 52 | 0 | 1 | 34 | 13 | 0 | 51 | 40 |
| 200 | 1 | 8 | 23 | 44 | 0 | 3 | 8 | 27 | 1 | 43 | 20 |
| 300 | 7 | 27 | 35 | 36 | 0 | 4 | 42 | 40 | 2 | 35 | 0 |
| 400 | 2 | 16 | 47 | 28 | 0 | 6 | 16 | 53 | 3 | 26 | 40 |
| 500 | 9 | 5 | 59 | 20 | 0 | 7 | 51 | 7 | 4 | 18 | 20 |
| 600 | 3 | 25 | 11 | 12 | 0 | 9 | 25 | 20 | 5 | 10 | 0 |
| 700 | 10 | 14 | 23 | 4 | 0 | 10 | 59 | 33 | 6 | 1 | 40 |
| 800 | 5 | 3 | 34 | 56 | 0 | 12 | 33 | 47 | 6 | 53 | 20 |
| 900 | 11 | 22 | 46 | 48 | 0 | 14 | 8 | 0 | 7 | 45 | 0 |
| 1000 | 6 | 11 | 58 | 40 | 0 | 15 | 42 | 13 | 8 | 36 | 40 |
| 1100 | 1 | 1 | 10 | 32 | 0 | 17 | 16 | 27 | 9 | 28 | 20 |
| 1200 | 7 | 20 | 22 | 24 | 0 | 18 | 50 | 40 | 10 | 20 | 0 |
| 1300 | 2 | 9 | 34 | 16 | 0 | 20 | 24 | 53 | 11 | 11 | 40 |
| 1400 | 8 | 28 | 46 | 8 | 0 | 21 | 59 | 7 | 12 | 3 | 20 |
| 1500 | 3 | 17 | 58 | 0 | 0 | 23 | 33 | 20 | 12 | 55 | 0 |
| 1600 | 10 | 7 | 9 | 52 | 0 | 25 | 7 | 33 | 13 | 46 | 40 |
| 1700 | 4 | 26 | 21 | 44 | 0 | 26 | 41 | 47 | 14 | 38 | 20 |
| 1800 | 11 | 15 | 33 | 36 | 0 | 28 | 16 | 0 | 15 | 30 | 0 |
| 1900 | 6 | 4 | 45 | 28 | 0 | 29 | 50 | 13 | 16 | 21 | 40 |
| 2000 | 0 | 23 | 57 | 20 | 1 | 1 | 24 | 27 | 17 | 13 | 20 |
| 2100 | 7 | 13 | 9 | 12 | 1 | 2 | 58 | 40 | 18 | 5 | 0 |
| 2200 | 2 | 2 | 21 | 4 | 1 | 4 | 32 | 53 | 18 | 56 | 40 |
| 2300 | 8 | 21 | 32 | 56 | 1 | 6 | 7 | 7 | 19 | 48 | 20 |
| 2400 | 3 | 10 | 44 | 48 | 1 | 7 | 41 | 20 | 20 | 40 | 0 |
| 2500 | 9 | 29 | 56 | 40 | 1 | 9 | 15 | 33 | 21 | 31 | 40 |
| 2600 | 4 | 19 | 8 | 32 | 1 | 10 | 49 | 47 | 22 | 23 | 20 |
| 2700 | 11 | 8 | 20 | 24 | 1 | 12 | 24 | 0 | 23 | 15 | 0 |
| 2800 | 5 | 27 | 32 | 16 | 1 | 13 | 58 | 13 | 24 | 6 | 40 |
| 2900 | 0 | 16 | 44 | 8 | 1 | 15 | 32 | 27 | 24 | 58 | 20 |
| 3000 | 7 | 5 | 56 | 0 | 1 | 17 | 6 | 40 | 25 | 50 | 0 |
| 3100 | 1 | 25 | 7 | 52 | 1 | 18 | 40 | 53 | 26 | 41 | 40 |
| 3200 | 8 | 14 | 19 | 44 | 1 | 20 | 15 | 7 | 27 | 33 | 20 |

## *IN HORIS ET MIN.*

*Medius Motus Veneris.*

| ″ / H | ′ / o | ″′ / ′ | ″″ / ″ | ″ / H | ′ / o | ″′ / ′ | ″″ / ″ |
|---|---|---|---|---|---|---|---|
| 1 | 0 | 4 | 0 | 31 | 2 | 4 | 10 |
| 2 | 0 | 8 | 1 | 32 | 2 | 8 | 10 |
| 3 | 0 | 12 | 1 | 33 | 2 | 12 | 10 |
| 4 | 0 | 16 | 1 | 34 | 2 | 16 | 11 |
| 5 | 0 | 20 | 2 | 35 | 2 | 20 | 11 |
| 6 | 0 | 24 | 2 | 36 | 2 | 24 | 11 |
| 7 | 0 | 28 | 2 | 37 | 2 | 28 | 12 |
| 8 | 0 | 32 | 3 | 38 | 2 | 32 | 12 |
| 9 | 0 | 36 | 3 | 39 | 2 | 36 | 12 |
| 10 | 0 | 40 | 3 | 40 | 2 | 40 | 13 |
| 11 | 0 | 44 | 4 | 41 | 2 | 44 | 13 |
| 12 | 0 | 48 | 4 | 42 | 2 | 48 | 13 |
| 13 | 0 | 52 | 4 | 43 | 2 | 52 | 14 |
| 14 | 0 | 56 | 4 | 44 | 2 | 56 | 14 |
| 15 | 1 | 0 | 5 | 45 | 3 | 0 | 14 |
| 16 | 1 | 4 | 5 | 46 | 3 | 4 | 15 |
| 17 | 1 | 8 | 5 | 47 | 3 | 8 | 15 |
| 18 | 1 | 12 | 6 | 48 | 3 | 12 | 16 |
| 19 | 1 | 16 | 6 | 49 | 3 | 16 | 16 |
| 20 | 1 | 20 | 6 | 50 | 3 | 20 | 16 |
| 21 | 1 | 24 | 7 | 51 | 3 | 24 | 16 |
| 22 | 1 | 28 | 7 | 52 | 3 | 28 | 17 |
| 23 | 1 | 32 | 7 | 53 | 3 | 32 | 17 |
| 24 | 1 | 36 | 8 | 54 | 3 | 36 | 17 |
| 25 | 1 | 40 | 8 | 55 | 3 | 40 | 18 |
| 26 | 1 | 44 | 8 | 56 | 3 | 44 | 18 |
| 27 | 1 | 48 | 9 | 57 | 3 | 48 | 18 |
| 28 | 1 | 52 | 9 | 58 | 3 | 52 | 19 |
| 29 | 1 | 56 | 9 | 59 | 3 | 56 | 19 |
| 30 | 2 | 0 | 10 | 60 | 4 | 0 | 19 |

## TABULA ÆQUATIONUM VENERIS.

*Anomalia media Veneris.*

| Gr. | Sig. o. Subtr. | Sig. I. Subtr. | Sig. II. Subtr. | Sig. III. Subtr. | Sig. IV. Subtr. | Sig. V. Subtr. | |
|---|---|---|---|---|---|---|---|
| | ° ′ ″ | ° ′ ″ | ° ′ ″ | ° ′ ″ | ° ′ ″ | ° ′ ″ | |
| 0 | 0 0 0 | 0 23 50 | 0 41 24 | 0 48 0 | 0 41 45 | 0 24 10 | 30 |
| 1 | 0 0 50 | 0 24 33 | 0 41 48 | 0 48 0 | 0 41 19 | 0 23 26 | 29 |
| 2 | 0 1 40 | 0 25 15 | 0 42 12 | 0 47 59 | 0 40 53 | 0 22 42 | 28 |
| 3 | 0 2 30 | 0 25 57 | 0 42 35 | 0 47 57 | 0 40 26 | 0 21 57 | 27 |
| 4 | 0 3 20 | 0 26 39 | 0 42 58 | 0 47 54 | 0 39 59 | 0 21 12 | 26 |
| 5 | 0 4 10 | 0 27 20 | 0 43 20 | 0 47 50 | 0 39 31 | 0 20 27 | 25 |
| 6 | 0 4 59 | 0 28 1 | 0 43 41 | 0 47 46 | 0 39 2 | 0 19 41 | 24 |
| 7 | 0 5 48 | 0 28 41 | 0 44 1 | 0 47 41 | 0 38 32 | 0 18 55 | 23 |
| 8 | 0 6 37 | 0 29 21 | 0 44 21 | 0 47 34 | 0 38 1 | 0 18 7 | 22 |
| 9 | 0 7 26 | 0 30 0 | 0 44 40 | 0 47 27 | 0 37 30 | 0 17 20 | 21 |
| 10 | 0 8 15 | 0 30 39 | 0 44 58 | 0 47 20 | 0 36 58 | 0 16 33 | 20 |
| 11 | 0 9 5 | 0 31 17 | 0 45 16 | 0 47 11 | 0 36 26 | 0 15 45 | 19 |
| 12 | 0 9 54 | 0 31 54 | 0 45 32 | 0 47 2 | 0 35 52 | 0 14 57 | 18 |
| 13 | 0 10 43 | 0 32 31 | 0 45 48 | 0 46 51 | 0 35 19 | 0 14 9 | 17 |
| 14 | 0 11 31 | 0 33 8 | 0 46 2 | 0 46 40 | 0 34 44 | 0 13 20 | 16 |
| 15 | 0 12 19 | 0 33 44 | 0 46 16 | 0 46 28 | 0 34 9 | 0 12 32 | 15 |
| 16 | 0 13 7 | 0 34 19 | 0 46 29 | 0 46 15 | 0 33 33 | 0 11 43 | 14 |
| 17 | 0 13 55 | 0 34 53 | 0 46 41 | 0 46 1 | 0 32 57 | 0 10 54 | 13 |
| 18 | 0 14 42 | 0 35 27 | 0 46 53 | 0 45 46 | 0 32 19 | 0 10 4 | 12 |
| 19 | 0 15 30 | 0 36 1 | 0 47 3 | 0 45 30 | 0 31 42 | 0 9 14 | 11 |
| 20 | 0 16 17 | 0 36 33 | 0 47 12 | 0 45 14 | 0 31 3 | 0 8 24 | 10 |
| 21 | 0 17 4 | 0 37 5 | 0 47 20 | 0 44 56 | 0 30 24 | 0 7 34 | 9 |
| 22 | 0 17 50 | 0 37 37 | 0 47 28 | 0 44 38 | 0 29 45 | 0 6 44 | 8 |
| 23 | 0 18 36 | 0 38 8 | 0 47 35 | 0 44 19 | 0 29 5 | 0 5 54 | 7 |
| 24 | 0 19 22 | 0 38 38 | 0 47 42 | 0 43 59 | 0 28 25 | 0 5 3 | 6 |
| 25 | 0 20 7 | 0 39 7 | 0 47 47 | 0 43 39 | 0 27 44 | 0 4 12 | 5 |
| 26 | 0 20 52 | 0 39 36 | 0 47 52 | 0 43 18 | 0 27 2 | 0 3 22 | 4 |
| 27 | 0 21 37 | 0 40 4 | 0 47 55 | 0 42 56 | 0 26 20 | 0 2 31 | 3 |
| 28 | 0 22 22 | 0 40 31 | 0 47 58 | 0 42 33 | 0 25 37 | 0 1 41 | 2 |
| 29 | 0 23 6 | 0 40 58 | 0 47 59 | 0 42 9 | 0 24 54 | 0 0 51 | 1 |
| 30 | 0 23 50 | 0 41 24 | 0 48 0 | 0 41 45 | 0 24 10 | 0 0 0 | 0 |
| | Sig. XI. Adde. | Sig. X. Adde. | Sig. IX. Adde. | Sig. VIII. Adde. | Sig. VII. Adde. | Sig. VI. Adde. | Gr. |

## LOGARITHMI DISTANTIARUM VENERIS A SOLE.

*Anomalia media Veneris.*

| Gr. | Sig. o | Sig. I. | Sig. II. | Sig. III. | Sig. IV. | Sig. V. | |
|---|---|---|---|---|---|---|---|
| | *Logar.* | *Logar.* | *Logar.* | *Logar.* | *Logar.* | *Logar.* | |
| 0 | 4 862359 | 4 861961 | 4 860867 | 4 859359 | 4 857835 | 4 856709 | 30 |
| 1 | 4 862358 | 4 861934 | 4 860821 | 4 859306 | 4 857789 | 4 856683 | 29 |
| 2 | 4 862356 | 4 861907 | 4 860775 | 4 859253 | 4 857743 | 4 856657 | 28 |
| 3 | 4 862354 | 4 861879 | 4 860729 | 4 859200 | 4 857698 | 4 856632 | 27 |
| 4 | 4 862352 | 4 861850 | 4 860682 | 4 859147 | 4 857653 | 4 856608 | 26 |
| 5 | 4 862348 | 4 861821 | 4 860635 | 4 859094 | 4 857609 | 4 856585 | 25 |
| 6 | 4 862343 | 4 861791 | 4 860587 | 4 859041 | 4 857566 | 4 856563 | 24 |
| 7 | 4 862337 | 4 861760 | 4 860539 | 4 858989 | 4 857523 | 4 856541 | 23 |
| 8 | 4 862330 | 4 861728 | 4 860490 | 4 858936 | 4 857480 | 4 856520 | 22 |
| 9 | 4 862322 | 4 861696 | 4 860441 | 4 858884 | 4 857438 | 4 856501 | 21 |
| 10 | 4 862314 | 4 861663 | 4 860392 | 4 858831 | 4 857397 | 4 856482 | 20 |
| 11 | 4 862304 | 4 861629 | 4 860342 | 4 858879 | 4 857356 | 4 856464 | 19 |
| 12 | 4 862294 | 4 861594 | 4 860292 | 4 858727 | 4 857316 | 4 856447 | 18 |
| 13 | 4 862282 | 4 861559 | 4 860242 | 4 858675 | 4 857276 | 4 856431 | 17 |
| 14 | 4 862270 | 4 861523 | 4 860192 | 4 858623 | 4 857237 | 4 856415 | 16 |
| 15 | 4 862257 | 4 861486 | 4 860141 | 4 858572 | 4 857199 | 4 856401 | 15 |
| 16 | 4 862244 | 4 861449 | 4 860090 | 4 858521 | 4 857161 | 4 856387 | 14 |
| 17 | 4 862229 | 4 861411 | 4 860039 | 4 858470 | 4 857124 | 4 856375 | 13 |
| 18 | 4 862214 | 4 861373 | 4 859988 | 4 858419 | 4 857088 | 4 856363 | 12 |
| 19 | 4 862197 | 4 861334 | 4 859936 | 4 858368 | 4 857053 | 4 856352 | 11 |
| 20 | 4 862180 | 4 861294 | 4 859884 | 4 858318 | 4 857016 | 4 856342 | 10 |
| 21 | 4 862162 | 4 861254 | 4 859832 | 4 858268 | 4 856984 | 4 856333 | 9 |
| 22 | 4 862143 | 4 861213 | 4 859780 | 4 858218 | 4 856950 | 4 856325 | 8 |
| 23 | 4 862123 | 4 861172 | 4 859728 | 4 858169 | 4 856917 | 4 856318 | 7 |
| 24 | 4 862102 | 4 861130 | 4 859676 | 4 858120 | 4 856885 | 4 856312 | 6 |
| 25 | 4 862080 | 4 861087 | 4 859623 | 4 858072 | 4 856854 | 4 856307 | 5 |
| 26 | 4 862058 | 4 861044 | 4 859570 | 4 858024 | 4 856823 | 4 856303 | 4 |
| 27 | 4 862035 | 4 861000 | 4 859518 | 4 857976 | 4 856794 | 4 856299 | 3 |
| 28 | 4 862011 | 4 860956 | 4 859465 | 4 857928 | 4 856765 | 4 856297 | 2 |
| 29 | 4 861986 | 4 860912 | 4 859412 | 4 857881 | 4 856737 | 4 856295 | 1 |
| 30 | 4 861961 | 4 860867 | 4 859359 | 4 857835 | 4 856709 | 4 856295 | 0 |
| | Sig. XI. | Sig. X. | Sig. IX. | Sig. VIII. | Sig. VII. | Sig. VI. | Gr. |

# TABULA LATITUDINARIA VENERIS.

| Argument. Latitudinis. | Sig. 0. Bor. / Sig. 6. Aust. | Subtr. | Curtatio | Sig. 1. Bor. / Sig. 7. Aust. | Subtr. | Curtatio | Sig. 2. Bor. / Sig. 8. Aust. | Subtr. | Curtatio | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Inclinatio. | Reduct. | | Inclinatio. | Reduct. | | Inclinatio. | Reduct. | | |
| Gr. | ° ′ ″ | ′ ″ | Log. | ° ′ ″ | ′ ″ | Log. | ° ′ ″ | ′ ″ | Log. | |
| 0 | 0 0 0 | 0 0 | 0 | 1 41 37 | 2 36 | 190 | 2 56 4 | 2 36 | 570 | 30 |
| 1 | 0 3 33 | 0 6 | 0 | 1 44 41 | 2 39 | 201 | 2 57 49 | 2 32 | 581 | 29 |
| 2 | 0 7 6 | 0 13 | 1 | 1 47 42 | 2 42 | 213 | 2 59 30 | 2 29 | 592 | 28 |
| 3 | 0 10 38 | 0 19 | 2 | 1 50 42 | 2 44 | 225 | 3 1 9 | 2 26 | 603 | 27 |
| 4 | 0 14 11 | 0 25 | 4 | 1 53 39 | 2 47 | 237 | 3 2 44 | 2 22 | 614 | 26 |
| 5 | 0 17 42 | 0 31 | 6 | 1 56 35 | 2 49 | 250 | 3 4 16 | 2 18 | 624 | 25 |
| 6 | 0 21 14 | 0 37 | 8 | 1 59 28 | 2 51 | 262 | 3 5 44 | 2 14 | 634 | 24 |
| 7 | 0 24 46 | 0 43 | 11 | 2 2 19 | 2 53 | 275 | 3 7 9 | 2 9 | 644 | 23 |
| 8 | 0 28 17 | 0 50 | 15 | 2 5 8 | 2 54 | 288 | 3 8 30 | 2 5 | 653 | 22 |
| 9 | 0 31 48 | 0 56 | 19 | 2 7 55 | 2 56 | 301 | 3 9 49 | 2 0 | 662 | 21 |
| 10 | 0 35 17 | 1 1 | 23 | 2 10 39 | 2 57 | 314 | 3 11 3 | 1 56 | 671 | 20 |
| 11 | 0 38 46 | 1 7 | 28 | 2 13 21 | 2 58 | 327 | 3 12 14 | 1 51 | 679 | 19 |
| 12 | 0 42 15 | 1 13 | 33 | 2 16 1 | 2 59 | 340 | 3 13 22 | 1 46 | 687 | 18 |
| 13 | 0 45 43 | 1 19 | 38 | 2 18 38 | 2 59 | 353 | 3 14 26 | 1 41 | 695 | 17 |
| 14 | 0 49 10 | 1 24 | 44 | 2 21 12 | 3 0 | 366 | 3 15 27 | 1 35 | 702 | 16 |
| 15 | 0 52 36 | 1 30 | 51 | 2 23 44 | 3 0 | 380 | 3 16 24 | 1 30 | 709 | 15 |
| 16 | 0 56 1 | 1 35 | 58 | 2 26 13 | 3 0 | 393 | 3 17 17 | 1 24 | 716 | 14 |
| 17 | 0 59 25 | 1 41 | 65 | 2 28 40 | 2 59 | 406 | 3 18 6 | 1 19 | 721 | 13 |
| 18 | 1 2 48 | 1 46 | 72 | 2 31 4 | 2 59 | 420 | 3 18 53 | 1 13 | 727 | 12 |
| 19 | 1 6 10 | 1 51 | 80 | 2 33 25 | 2 58 | 433 | 3 19 35 | 1 7 | 732 | 11 |
| 20 | 1 9 30 | 1 56 | 89 | 2 35 43 | 2 57 | 446 | 3 20 14 | 1 1 | 737 | 10 |
| 21 | 1 12 50 | 2 0 | 97 | 2 37 59 | 2 56 | 459 | 3 20 50 | 0 56 | 741 | 9 |
| 22 | 1 16 8 | 2 5 | 106 | 2 40 12 | 2 54 | 472 | 3 21 21 | 0 50 | 745 | 8 |
| 23 | 1 19 24 | 2 9 | 116 | 2 42 21 | 2 53 | 485 | 3 21 49 | 0 43 | 749 | 7 |
| 24 | 1 22 40 | 2 14 | 125 | 2 44 28 | 2 51 | 497 | 3 22 13 | 0 37 | 752 | 6 |
| 25 | 1 25 54 | 2 18 | 135 | 2 46 32 | 2 49 | 510 | 3 22 33 | 0 31 | 754 | 5 |
| 26 | 1 29 5 | 2 22 | 146 | 2 48 32 | 2 47 | 522 | 3 22 50 | 0 25 | 756 | 4 |
| 27 | 1 32 16 | 2 26 | 156 | 2 50 30 | 2 44 | 534 | 3 23 3 | 0 19 | 758 | 3 |
| 28 | 1 35 25 | 2 29 | 167 | 2 52 24 | 2 42 | 546 | 3 23 12 | 0 13 | 759 | 2 |
| 29 | 1 38 32 | 2 32 | 178 | 2 54 15 | 2 39 | 558 | 3 23 18 | 0 6 | 760 | 1 |
| 30 | 1 41 37 | 2 36 | 190 | 2 56 4 | 2 36 | 570 | 3 23 20 | 0 0 | 760 | 0 |
| | Sig. 11. Aust. / Sig. 5. Bor. | Adde. / Adde. | | Sig. 10. Aust. / Sig. 4. Bor. | Adde. / Adde. | | Sig. 9. Aust. / Sig. 3. Bor. | Adde. / Adde. | | Gr. |

## EPOCHÆ MEDIORUM MOTUUM MARTIS.

| Annis Juli-anis ineun-tibus. | Mars ab Æquinoct. ♂ ° ′ ″ | Aphel. ♂ ♌ 29° ° ′ ″ | Nod. ♂ ♉ 17° ′ ″ | Annis Juli-anis ineun-tibus. | Mars ab Æquinoct. ♂ ° ′ ″ | Aphel. ♂ ♍ 0° ° ′ ″ | Nod. ♂ ♉ 17° ′ ″ |
|---|---|---|---|---|---|---|---|
| 1661 | 9 1 45 22 | 47 50 | 0 0 | 1696 | 4 10 57 36 | 28 40 | 22 10 |
| 62 | 3 13 2 32 | 49 0 | 0 38 | 97 | 10 22 46 12 | 29 50 | 22 48 |
| 63 | 9 24 19 41 | 50 10 | 1 16 | 98 | 5 4 3 22 | 31 0 | 23 26 |
| 64 | 4 5 36 51 | 51 20 | 1 54 | 99 | 11 15 20 32 | 32 10 | 24 4 |
| 1665 | 10 17 25 27 | 52 30 | 2 32 | 1700 | 5 26 37 42 | 33 20 | 24 42 |
| 1666 | 4 28 42 37 | 53 40 | 3 10 | 1701 | 0 8 26 18 | 34 30 | 25 20 |
| 67 | 11 9 59 47 | 54 50 | 3 48 | 2 | 6 19 43 28 | 35 40 | 25 58 |
| 68 | 5 21 16 57 | 56 0 | 4 26 | 3 | 1 1 0 37 | 36 50 | 26 36 |
| 69 | 0 3 5 33 | 57 10 | 5 4 | 4 | 7 12 17 47 | 38 0 | 27 14 |
| 1670 | 6 14 22 43 | 58 20 | 5 42 | 1705 | 1 24 6 24 | 39 10 | 27 52 |
| 1671 | 0 25 39 53 | 59 30 | 6 20 | 1706 | 8 5 23 34 | 40 20 | 28 30 |
| 72 | 7 6 57 2 | 0 0 40 | 6 58 | 7 | 2 16 40 43 | 41 30 | 29 8 |
| 73 | 1 18 45 39 | ♍ 1 50 | 7 36 | 8 | 8 27 57 53 | 42 40 | 29 46 |
| 74 | 8 0 2 48 | 3 0 | 8 14 | 9 | 3 9 46 29 | 43 50 | 30 24 |
| 1675 | 2 11 19 58 | 4 10 | 8 52 | 1710 | 9 21 3 39 | 45 0 | 31 2 |
| 1676 | 8 22 37 8 | 5 20 | 9 30 | 1711 | 4 2 20 49 | 46 10 | 31 40 |
| 77 | 3 4 25 44 | 6 30 | 10 8 | 12 | 10 13 37 58 | 47 20 | 32 18 |
| 78 | 9 15 42 54 | 7 40 | 10 46 | 13 | 4 25 26 35 | 48 30 | 32 56 |
| 79 | 3 27 0 4 | 8 50 | 11 24 | 14 | 11 6 43 44 | 49 40 | 33 34 |
| 1680 | 10 8 17 14 | 10 0 | 12 2 | 1715 | 5 18 0 54 | 50 50 | 34 12 |
| 1681 | 4 20 5 50 | 11 10 | 12 40 | 1716 | 11 29 18 4 | 52 0 | 34 50 |
| 82 | 11 1 23 0 | 12 20 | 13 18 | 17 | 6 11 6 40 | 53 10 | 35 28 |
| 83 | 5 12 40 10 | 13 30 | 13 56 | 18 | 0 22 23 50 | 54 20 | 36 6 |
| 84 | 11 23 57 19 | 14 40 | 14 34 | 19 | 7 3 41 0 | 55 30 | 36 44 |
| 1685 | 6 5 45 56 | 15 50 | 15 12 | 1720 | 1 14 58 10 | 56 40 | 37 22 |
| 1686 | 0 17 3 6 | 17 0 | 15 50 | 1721 | 7 26 46 46 | 57 50 | 38 0 |
| 87 | 6 28 20 15 | 18 10 | 16 28 | 22 | 2 8 3 56 | 59 0 | 38 38 |
| 88 | 1 9 37 25 | 19 20 | 17 6 | 23 | 8 19 21 6 | 1 0 10 | 39 16 |
| 89 | 7 21 26 1 | 20 30 | 17 44 | 24 | 3 0 38 15 | ♍ 1 20 | 39 54 |
| 1690 | 2 2 43 11 | 21 40 | 18 22 | 1725 | 9 12 26 51 | 2 30 | 40 32 |
| 1691 | 8 14 0 21 | 22 50 | 19 0 | 1726 | 3 23 44 1 | 3 40 | 41 10 |
| 92 | 2 25 17 31 | 24 0 | 19 38 | 27 | 10 5 1 11 | 4 50 | 41 48 |
| 93 | 9 7 6 7 | 25 10 | 20 16 | 28 | 4 16 18 21 | 6 0 | 42 26 |
| 94 | 3 18 23 17 | 26 20 | 20 54 | 29 | 10 28 6 57 | 7 10 | 43 4 |
| 1695 | 9 29 40 27 | 27 30 | 21 32 | 1730 | 5 9 24 7 | 8 20 | 43 42 |

## EPOCHÆ MEDIORUM MOTUUM MARTIS.

| Annis Juli-anis ineun-tibus. | Mars ab Æquinoct. | | | | Aph. ♂ ♍ 1° | | Nodus ♂ ♉ 17° | | | Annis Juli-anis ineun-tibus. | Mars ab Æquinoct. | | | | Aphel. ♂ ♍ 1° | | Nod. ♂ ♉ 18° | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | s | o | ′ | ″ | ° | ′ | ° | ′ | ″ | | s | o | ′ | ″ | ° | ′ | ′ | ″ | |
| 1731 | 11 | 20 | 41 | 17 | 9 | 30 | 44 | 20 | | 1766 | 7 | 0 | 24 | 57 | 50 | 20 | 6 | 30 | |
| 32 | 6 | 1 | 58 | 27 | 10 | 40 | 44 | 58 | | 67 | 1 | 11 | 42 | 7 | 51 | 30 | 7 | 8 | |
| 33 | 0 | 13 | 47 | 3 | 11 | 50 | 45 | 36 | | 68 | 7 | 22 | 59 | 17 | 52 | 40 | 7 | 46 | |
| 34 | 6 | 25 | 4 | 13 | 13 | 0 | 46 | 14 | | 69 | 2 | 4 | 47 | 53 | 53 | 50 | 8 | 24 | |
| 1735 | 1 | 6 | 21 | 23 | 14 | 10 | 46 | 52 | | 1770 | 8 | 16 | 5 | 3 | 55 | 0 | 9 | 2 | |
| 1736 | 7 | 17 | 38 | 32 | 15 | 20 | 47 | 30 | | 1771 | 2 | 27 | 22 | 13 | 56 | 10 | 9 | 40 | |
| 37 | 1 | 29 | 27 | 8 | 16 | 30 | 48 | 8 | | 72 | 9 | 8 | 39 | 23 | 57 | 20 | 10 | 18 | |
| 38 | 8 | 10 | 44 | 18 | 17 | 40 | 48 | 46 | | 73 | 3 | 20 | 27 | 59 | 58 | 30 | 10 | 56 | |
| 39 | 2 | 22 | 1 | 28 | 18 | 50 | 49 | 24 | | 74 | 10 | 1 | 45 | 9 | 59 | 40 | 11 | 34 | |
| 1740 | 9 | 3 | 18 | 38 | 20 | 0 | 50 | 2 | | 1775 | 4 | 13 | 2 | 19 | 2 | 0 | 50 | 12 | 12 |
| 1741 | 3 | 15 | 7 | 14 | 21 | 10 | 50 | 40 | | 1776 | 10 | 24 | 19 | 29 | 2 | 0 | 12 | 50 | |
| 42 | 9 | 26 | 24 | 24 | 22 | 20 | 51 | 18 | | 77 | 5 | 6 | 8 | 5 | 3 | 10 | 13 | 28 | |
| 43 | 4 | 7 | 41 | 34 | 23 | 30 | 51 | 56 | | 78 | 11 | 17 | 25 | 14 | 4 | 20 | 14 | 6 | |
| 44 | 10 | 18 | 58 | 43 | 24 | 40 | 52 | 34 | | 79 | 5 | 28 | 42 | 24 | 5 | 30 | 14 | 44 | |
| 1745 | 5 | 0 | 47 | 19 | 25 | 50 | 53 | 12 | | 1780 | 0 | 9 | 59 | 34 | 6 | 40 | 15 | 22 | |
| 1746 | 11 | 12 | 4 | 29 | 27 | 0 | 53 | 50 | | 1781 | 6 | 21 | 48 | 10 | 7 | 50 | 16 | 0 | |
| 47 | 5 | 23 | 21 | 39 | 28 | 10 | 54 | 28 | | 82 | 1 | 3 | 5 | 20 | 9 | 0 | 16 | 38 | |
| 48 | 0 | 4 | 38 | 49 | 29 | 20 | 55 | 6 | | 83 | 7 | 14 | 22 | 30 | 10 | 10 | 17 | 16 | |
| 49 | 6 | 16 | 27 | 25 | 30 | 30 | 55 | 44 | | 84 | 1 | 25 | 39 | 40 | 11 | 20 | 17 | 54 | |
| 1750 | 0 | 27 | 44 | 35 | 31 | 40 | 56 | 22 | | 1785 | 8 | 7 | 28 | 16 | 12 | 30 | 18 | 32 | |
| 1751 | 7 | 9 | 1 | 45 | 32 | 50 | 57 | 0 | | 1786 | 2 | 18 | 45 | 26 | 13 | 40 | 19 | 10 | |
| 52 | 1 | 20 | 18 | 55 | 34 | 0 | 57 | 38 | | 87 | 9 | 0 | 2 | 36 | 14 | 50 | 19 | 48 | |
| 53 | 8 | 2 | 7 | 31 | 35 | 10 | 58 | 16 | | 88 | 3 | 11 | 19 | 46 | 16 | 0 | 20 | 26 | |
| 54 | 2 | 13 | 24 | 41 | 36 | 20 | 58 | 54 | | 89 | 9 | 23 | 8 | 22 | 17 | 10 | 21 | 4 | |
| 1755 | 8 | 24 | 41 | 51 | 37 | 30 | 59 | 32 | | 1790 | 4 | 4 | 25 | 31 | 18 | 20 | 21 | 42 | |
| 1756 | 3 | 5 | 59 | 0 | 38 | 40 | 18 | 0 | 10 | 1791 | 10 | 15 | 42 | 41 | 19 | 30 | 22 | 20 | |
| 57 | 9 | 17 | 47 | 36 | 39 | 50 | ♉ | 0 | 48 | 92 | 4 | 26 | 59 | 51 | 20 | 40 | 22 | 58 | |
| 58 | 3 | 29 | 4 | 46 | 41 | 0 | | 1 | 26 | 93 | 11 | 8 | 48 | 27 | 21 | 50 | 23 | 36 | |
| 59 | 10 | 10 | 21 | 56 | 42 | 10 | | 2 | 4 | 94 | 5 | 20 | 5 | 37 | 23 | 0 | 24 | 14 | |
| 1760 | 4 | 21 | 39 | 6 | 43 | 20 | | 2 | 42 | 1795 | 0 | 1 | 22 | 47 | 24 | 10 | 24 | 52 | |
| 1761 | 11 | 3 | 27 | 42 | 44 | 30 | | 3 | 20 | 1796 | 6 | 12 | 39 | 56 | 25 | 20 | 25 | 30 | |
| 62 | 5 | 14 | 44 | 52 | 45 | 40 | | 3 | 58 | 97 | 0 | 24 | 28 | 32 | 26 | 30 | 26 | 8 | |
| 63 | 11 | 26 | 2 | 2 | 46 | 50 | | 4 | 36 | 98 | 7 | 5 | 45 | 42 | 27 | 40 | 26 | 46 | |
| 64 | 6 | 7 | 19 | 12 | 48 | 0 | | 5 | 14 | 99 | 1 | 17 | 2 | 52 | 28 | 50 | 27 | 24 | |
| 1765 | 0 | 19 | 7 | 48 | 49 | 10 | | 5 | 52 | 1800 | 7 | 28 | 20 | 2 | 30 | 0 | 28 | 2 | |

# *MEDIUS MOTUS MARTIS AD DIES MENSIUM.*

| *Die Mensis.* | JANUARII *Medius Motus Martis.* | | | | FEBRUARII *Medius Motus Martis.* | | | | MARTII *Medius Motus Martis.* | | | | APRILIS *Medius Motus Martis.* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *S* | o | ′ | ″ | *S* | o | ′ | ″ | *S* | o | ′ | ″ | *S* | o | ′ | ″ |
| 1 | 0 | 0 | 31 | 27 | 0 | 16 | 46 | 13 | 1 | 1 | 26 | 39 | 1 | 17 | 41 | 26 |
| 2 | 0 | 1 | 2 | 54 | 0 | 17 | 17 | 40 | 1 | 1 | 58 | 6 | 1 | 18 | 12 | 52 |
| 3 | 0 | 1 | 34 | 20 | 0 | 17 | 49 | 6 | 1 | 2 | 29 | 33 | 1 | 18 | 44 | 19 |
| 4 | 0 | 2 | 5 | 47 | 0 | 18 | 20 | 33 | 1 | 3 | 0 | 59 | 1 | 19 | 15 | 46 |
| 5 | 0 | 2 | 37 | 13 | 0 | 18 | 52 | 0 | 1 | 3 | 32 | 26 | 1 | 19 | 47 | 12 |
| 6 | 0 | 3 | 8 | 40 | 0 | 19 | 23 | 26 | 1 | 4 | 3 | 53 | 1 | 20 | 18 | 39 |
| 7 | 0 | 3 | 40 | 7 | 0 | 19 | 54 | 53 | 1 | 4 | 35 | 19 | 1 | 20 | 50 | 6 |
| 8 | 0 | 4 | 11 | 33 | 0 | 20 | 26 | 20 | 1 | 5 | 6 | 46 | 1 | 21 | 21 | 32 |
| 9 | 0 | 4 | 43 | 0 | 0 | 20 | 57 | 46 | 1 | 5 | 38 | 13 | 1 | 21 | 52 | 59 |
| 10 | 0 | 5 | 14 | 27 | 0 | 21 | 29 | 13 | 1 | 6 | 9 | 39 | 1 | 22 | 24 | 26 |
| 11 | 0 | 5 | 45 | 53 | 0 | 22 | 0 | 40 | 1 | 6 | 41 | 6 | 1 | 22 | 55 | 52 |
| 12 | 0 | 6 | 17 | 20 | 0 | 22 | 32 | 6 | 1 | 7 | 12 | 33 | 1 | 23 | 27 | 19 |
| 13 | 0 | 6 | 48 | 47 | 0 | 23 | 3 | 33 | 1 | 7 | 43 | 59 | 1 | 23 | 58 | 46 |
| 14 | 0 | 7 | 20 | 13 | 0 | 23 | 35 | 0 | 1 | 8 | 15 | 26 | 1 | 24 | 30 | 12 |
| 15 | 0 | 7 | 51 | 40 | 0 | 24 | 6 | 26 | 1 | 8 | 46 | 53 | 1 | 25 | 1 | 39 |
| 16 | 0 | 8 | 23 | 6 | 0 | 24 | 37 | 53 | 1 | 9 | 18 | 19 | 1 | 25 | 33 | 6 |
| 17 | 0 | 8 | 54 | 33 | 0 | 25 | 9 | 19 | 1 | 9 | 49 | 46 | 1 | 26 | 4 | 32 |
| 18 | 0 | 9 | 26 | 0 | 0 | 25 | 40 | 46 | 1 | 10 | 21 | 12 | 1 | 26 | 35 | 59 |
| 19 | 0 | 9 | 57 | 26 | 0 | 26 | 12 | 13 | 1 | 10 | 52 | 39 | 1 | 27 | 7 | 26 |
| 20 | 0 | 10 | 28 | 53 | 0 | 26 | 43 | 39 | 1 | 11 | 24 | 5 | 1 | 27 | 38 | 52 |
| 21 | 0 | 11 | 0 | 20 | 0 | 27 | 15 | 6 | 1 | 11 | 55 | 32 | 1 | 28 | 10 | 19 |
| 22 | 0 | 11 | 31 | 46 | 0 | 27 | 46 | 33 | 1 | 12 | 26 | 59 | 1 | 28 | 41 | 46 |
| 23 | 0 | 12 | 3 | 13 | 0 | 28 | 17 | 59 | 1 | 12 | 58 | 26 | 1 | 29 | 13 | 12 |
| 24 | 0 | 12 | 34 | 40 | 0 | 28 | 49 | 26 | 1 | 13 | 29 | 52 | 1 | 29 | 44 | 39 |
| 25 | 0 | 13 | 6 | 6 | 0 | 29 | 20 | 53 | 1 | 14 | 1 | 19 | 2 | 0 | 16 | 6 |
| 26 | 0 | 13 | 37 | 33 | 0 | 29 | 52 | 19 | 1 | 14 | 32 | 46 | 2 | 0 | 47 | 32 |
| 27 | 0 | 14 | 9 | 0 | 1 | 0 | 23 | 46 | 1 | 15 | 4 | 12 | 2 | 1 | 18 | 59 |
| 28 | 0 | 14 | 40 | 26 | 1 | 0 | 55 | 13 | 1 | 15 | 35 | 39 | 2 | 1 | 50 | 26 |
| 29 | 0 | 15 | 11 | 53 | *In Anno* Bissextili *post* Februarium *adde unius diei motum.* | | | | 1 | 16 | 7 | 5 | 2 | 2 | 21 | 52 |
| 30 | 0 | 15 | 43 | 20 | | | | | 1 | 16 | 38 | 32 | 2 | 2 | 53 | 19 |
| 31 | 0 | 16 | 14 | 46 | | | | | 1 | 17 | 9 | 59 | | | | |
| *Motus Aphelii* | | 0 | | 6 | | | 0 | 12 | | | 0 | 18 | | | | |
| *Motus Nodi* | | 0 | | 3 | | | 0 | 6 | | | 0 | 10 | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | ′ | ″ |
| | | | | | | | 0 | 23 |
| | | | | | | | 0 | 13 |

## MEDIUS MOTUS MARTIS AD DIES MENSIUM.

| Die Mensis. | MAII Medius Motus Martis. | | | | JUNII Medius Motus Martis. | | | | JULII Medius Motus Martis. | | | | AUGUSTI Medius Motus Martis. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ |
| 1 | 2 | 3 | 24 | 46 | 2 | 19 | 39 | 33 | 3 | 5 | 22 | 51 | 3 | 21 | 37 | 38 |
| 2 | 2 | 3 | 56 | 13 | 2 | 20 | 10 | 59 | 3 | 5 | 54 | 18 | 3 | 22 | 9 | 4 |
| 3 | 2 | 4 | 27 | 40 | 2 | 20 | 42 | 26 | 3 | 6 | 25 | 45 | 3 | 22 | 40 | 31 |
| 4 | 2 | 4 | 59 | 6 | 2 | 21 | 13 | 53 | 3 | 6 | 57 | 11 | 3 | 23 | 11 | 58 |
| 5 | 2 | 5 | 30 | 33 | 2 | 21 | 45 | 19 | 3 | 7 | 28 | 38 | 3 | 23 | 43 | 24 |
| 6 | 2 | 6 | 2 | 0 | 2 | 22 | 16 | 46 | 3 | 8 | 0 | 5 | 3 | 24 | 14 | 51 |
| 7 | 2 | 6 | 33 | 26 | 2 | 22 | 48 | 13 | 3 | 8 | 31 | 32 | 3 | 24 | 46 | 18 |
| 8 | 2 | 7 | 4 | 53 | 2 | 23 | 19 | 39 | 3 | 9 | 2 | 58 | 3 | 25 | 17 | 44 |
| 9 | 2 | 7 | 36 | 20 | 2 | 23 | 51 | 6 | 3 | 9 | 34 | 25 | 3 | 25 | 49 | 11 |
| 10 | 2 | 8 | 7 | 46 | 2 | 24 | 22 | 33 | 3 | 10 | 5 | 51 | 3 | 26 | 20 | 37 |
| 11 | 2 | 8 | 39 | 13 | 2 | 24 | 53 | 59 | 3 | 10 | 37 | 18 | 3 | 26 | 52 | 4 |
| 12 | 2 | 9 | 10 | 40 | 2 | 25 | 25 | 26 | 3 | 11 | 8 | 44 | 3 | 27 | 23 | 31 |
| 13 | 2 | 9 | 42 | 6 | 2 | 25 | 56 | 53 | 3 | 11 | 40 | 11 | 3 | 27 | 54 | 58 |
| 14 | 2 | 10 | 13 | 33 | 2 | 26 | 28 | 19 | 3 | 12 | 11 | 38 | 3 | 28 | 26 | 24 |
| 15 | 2 | 10 | 45 | 0 | 2 | 26 | 59 | 46 | 3 | 12 | 43 | 4 | 3 | 28 | 57 | 51 |
| 16 | 2 | 11 | 16 | 26 | 2 | 27 | 31 | 13 | 3 | 13 | 14 | 31 | 3 | 29 | 29 | 17 |
| 17 | 2 | 11 | 47 | 53 | 2 | 28 | 2 | 39 | 3 | 13 | 45 | 58 | 4 | 0 | 0 | 44 |
| 18 | 2 | 12 | 19 | 20 | 2 | 28 | 34 | 5 | 3 | 14 | 17 | 24 | 4 | 0 | 32 | 11 |
| 19 | 2 | 12 | 50 | 46 | 2 | 29 | 5 | 32 | 3 | 14 | 48 | 51 | 4 | 1 | 3 | 37 |
| 20 | 2 | 13 | 22 | 13 | 2 | 29 | 36 | 59 | 3 | 15 | 20 | 18 | 4 | 1 | 35 | 4 |
| 21 | 2 | 13 | 53 | 40 | 3 | 0 | 8 | 25 | 3 | 15 | 51 | 44 | 4 | 2 | 6 | 30 |
| 22 | 2 | 14 | 25 | 6 | 3 | 0 | 39 | 52 | 3 | 16 | 23 | 11 | 4 | 2 | 37 | 57 |
| 23 | 2 | 14 | 56 | 33 | 3 | 1 | 11 | 18 | 3 | 16 | 54 | 38 | 4 | 3 | 9 | 24 |
| 24 | 2 | 15 | 27 | 59 | 3 | 1 | 42 | 45 | 3 | 17 | 26 | 4 | 4 | 3 | 40 | 50 |
| 25 | 2 | 15 | 59 | 26 | 3 | 2 | 14 | 12 | 3 | 17 | 57 | 31 | 4 | 4 | 12 | 17 |
| 26 | 2 | 16 | 30 | 53 | 3 | 2 | 45 | 38 | 3 | 18 | 28 | 58 | 4 | 4 | 43 | 44 |
| 27 | 2 | 17 | 2 | 19 | 3 | 3 | 17 | 5 | 3 | 19 | 0 | 24 | 4 | 5 | 15 | 10 |
| 28 | 2 | 17 | 33 | 46 | 3 | 3 | 48 | 32 | 3 | 19 | 31 | 51 | 4 | 5 | 46 | 37 |
| 29 | 2 | 18 | 5 | 13 | 3 | 4 | 19 | 59 | 3 | 20 | 3 | 18 | 4 | 6 | 18 | 4 |
| 30 | 2 | 18 | 36 | 39 | 3 | 4 | 51 | 25 | 3 | 20 | 34 | 44 | 4 | 6 | 49 | 30 |
| 31 | 2 | 19 | 8 | 6 | | | ′ | ″ | 3 | 21 | 6 | 11 | 4 | 7 | 20 | 57 |
| *Motus Aphelii* | | | 0 | 29 | | | 0 | 35 | | | 0 | 41 | | | 0 | 47 |
| *Motus Nodi* | | | 0 | 16 | | | 0 | 19 | | | 0 | 22 | | | 0 | 25 |

## *MEDIUS MOTUS MARTIS AD DIES MENSIUM.*

| Die Mensis. | SEPTEMB. Medius Motus Martis. | | | | OCTOBRIS Medius Motus Martis. | | | | NOVEMB. Medius Motus Martis. | | | | DECEMB. Medius Motus Martis. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *S* | o | *I* | *II* | *S* | o | *I* | *II* | *S* | o | *I* | *II* | *S* | o | *I* | *II* |
| 1 | 4 | 7 | 52 | 25 | 4 | 23 | 35 | 44 | 5 | 9 | 50 | 31 | 5 | 25 | 33 | 50 |
| 2 | 4 | 8 | 23 | 51 | 4 | 24 | 7 | 11 | 5 | 10 | 21 | 57 | 5 | 26 | 5 | 17 |
| 3 | 4 | 8 | 55 | 18 | 4 | 24 | 38 | 38 | 5 | 10 | 53 | 24 | 5 | 26 | 36 | 44 |
| 4 | 4 | 9 | 26 | 45 | 4 | 25 | 10 | 4 | 5 | 11 | 24 | 51 | 5 | 27 | 8 | 10 |
| 5 | 4 | 9 | 58 | 11 | 4 | 25 | 41 | 31 | 5 | 11 | 56 | 17 | 5 | 27 | 39 | 37 |
| 6 | 4 | 10 | 29 | 38 | 4 | 26 | 12 | 58 | 5 | 12 | 27 | 44 | 5 | 28 | 11 | 4 |
| 7 | 4 | 11 | 1 | 5 | 4 | 26 | 44 | 24 | 5 | 12 | 59 | 11 | 5 | 28 | 42 | 30 |
| 8 | 4 | 11 | 32 | 31 | 4 | 27 | 15 | 51 | 5 | 13 | 30 | 37 | 5 | 29 | 13 | 57 |
| 9 | 4 | 12 | 3 | 58 | 4 | 27 | 47 | 18 | 5 | 14 | 2 | 4 | 5 | 29 | 45 | 23 |
| 10 | 4 | 12 | 35 | 25 | 4 | 28 | 18 | 44 | 5 | 14 | 33 | 30 | 6 | 0 | 16 | 50 |
| 11 | 4 | 13 | 6 | 51 | 4 | 28 | 50 | 11 | 5 | 15 | 4 | 57 | 6 | 0 | 48 | 17 |
| 12 | 4 | 13 | 38 | 18 | 4 | 29 | 21 | 38 | 5 | 15 | 36 | 24 | 6 | 1 | 19 | 43 |
| 13 | 4 | 14 | 9 | 45 | 4 | 29 | 53 | 4 | 5 | 16 | 7 | 50 | 6 | 1 | 51 | 10 |
| 14 | 4 | 14 | 41 | 11 | 5 | 0 | 24 | 31 | 5 | 16 | 39 | 17 | 6 | 2 | 22 | 37 |
| 15 | 4 | 15 | 12 | 38 | 5 | 0 | 55 | 57 | 5 | 17 | 10 | 43 | 6 | 2 | 54 | 3 |
| 16 | 4 | 15 | 44 | 4 | 5 | 1 | 27 | 24 | 5 | 17 | 42 | 10 | 6 | 3 | 25 | 30 |
| 17 | 4 | 16 | 15 | 31 | 5 | 1 | 58 | 51 | 5 | 18 | 13 | 37 | 6 | 3 | 56 | 57 |
| 18 | 4 | 16 | 46 | 58 | 5 | 2 | 30 | 17 | 5 | 18 | 45 | 4 | 6 | 4 | 28 | 23 |
| 19 | 4 | 17 | 18 | 24 | 5 | 3 | 1 | 44 | 5 | 19 | 16 | 30 | 6 | 4 | 59 | 50 |
| 20 | 4 | 17 | 49 | 51 | 5 | 3 | 33 | 11 | 5 | 19 | 47 | 57 | 6 | 5 | 31 | 17 |
| 21 | 4 | 18 | 21 | 18 | 5 | 4 | 4 | 37 | 5 | 20 | 19 | 24 | 6 | 6 | 2 | 43 |
| 22 | 4 | 18 | 52 | 44 | 5 | 4 | 36 | 4 | 5 | 20 | 50 | 50 | 6 | 6 | 34 | 10 |
| 23 | 4 | 19 | 24 | 11 | 5 | 5 | 7 | 31 | 5 | 21 | 22 | 17 | 6 | 7 | 5 | 37 |
| 24 | 4 | 19 | 55 | 38 | 5 | 5 | 38 | 57 | 5 | 21 | 53 | 44 | 6 | 7 | 37 | 3 |
| 25 | 4 | 20 | 27 | 4 | 5 | 6 | 10 | 24 | 5 | 22 | 25 | 10 | 6 | 8 | 8 | 30 |
| 26 | 4 | 20 | 58 | 31 | 5 | 6 | 41 | 51 | 5 | 22 | 56 | 37 | 6 | 8 | 39 | 57 |
| 27 | 4 | 21 | 29 | 58 | 5 | 7 | 13 | 17 | 5 | 23 | 28 | 4 | 6 | 9 | 11 | 23 |
| 28 | 4 | 22 | 1 | 24 | 5 | 7 | 44 | 44 | 5 | 23 | 59 | 30 | 6 | 9 | 42 | 50 |
| 29 | 4 | 22 | 32 | 51 | 5 | 8 | 16 | 11 | 5 | 24 | 30 | 57 | 6 | 10 | 14 | 17 |
| 30 | 4 | 23 | 4 | 18 | 5 | 8 | 47 | 37 | 5 | 25 | 2 | 24 | 6 | 10 | 45 | 43 |
| 31 | | | | | 5 | 9 | 19 | 4 | | | | | 6 | 11 | 17 | 10 |
| *Motus Aphelii* | | | 0 | 53 | | | 0 | 58 | | | 1 | 4 | | | 1 | 10 |
| *Motus Nodi* | | | 0 | 28 | | | 0 | 32 | | | 0 | 35 | | | 0 | 38 |

# MEDII MOTVS MARTIS AB ÆQVINOCTIO.

## IN ANNORVM CENTVRIIS.

| Annis Julian. Collect. | Medius Motus Martis. S | o | ′ | ″ | Motus Aphel. Martis. S | o | ′ | ″ | Motus Nodi Martis. S | o | ′ | ″ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 2 | 1 | 42 | 20 | 0 | 1 | 56 | 40 | 0 | 1 | 3 | 20 |
| 200 | 4 | 3 | 24 | 40 | 0 | 3 | 53 | 20 | 0 | 2 | 6 | 40 |
| 300 | 6 | 5 | 7 | 0 | 0 | 5 | 50 | 0 | 0 | 3 | 10 | 0 |
| 400 | 8 | 6 | 49 | 20 | 0 | 7 | 46 | 40 | 0 | 4 | 13 | 20 |
| 500 | 10 | 8 | 31 | 40 | 0 | 9 | 43 | 20 | 0 | 5 | 16 | 40 |
| 600 | 0 | 10 | 14 | 0 | 0 | 11 | 40 | 0 | 0 | 6 | 20 | 0 |
| 700 | 2 | 11 | 56 | 20 | 0 | 13 | 36 | 40 | 0 | 7 | 23 | 20 |
| 800 | 4 | 13 | 38 | 40 | 0 | 15 | 33 | 20 | 0 | 8 | 26 | 40 |
| 900 | 6 | 15 | 21 | 0 | 0 | 17 | 30 | 0 | 0 | 9 | 30 | 0 |
| 1000 | 8 | 17 | 3 | 20 | 0 | 19 | 26 | 40 | 0 | 10 | 33 | 20 |
| 1100 | 10 | 18 | 45 | 40 | 0 | 21 | 23 | 20 | 0 | 11 | 36 | 40 |
| 1200 | 0 | 20 | 28 | 0 | 0 | 23 | 20 | 0 | 0 | 12 | 40 | 0 |
| 1300 | 2 | 22 | 10 | 20 | 0 | 25 | 16 | 40 | 0 | 13 | 43 | 20 |
| 1400 | 4 | 23 | 52 | 40 | 0 | 27 | 13 | 20 | 0 | 14 | 46 | 40 |
| 1500 | 6 | 25 | 35 | 0 | 0 | 29 | 10 | 0 | 0 | 15 | 50 | 0 |
| 1600 | 8 | 27 | 17 | 20 | 1 | 1 | 6 | 40 | 0 | 16 | 53 | 20 |
| 1700 | 10 | 28 | 59 | 40 | 1 | 3 | 3 | 20 | 0 | 17 | 56 | 40 |
| 1800 | 1 | 0 | 42 | 0 | 1 | 5 | 0 | 0 | 0 | 19 | 0 | 0 |
| 1900 | 3 | 2 | 24 | 20 | 1 | 6 | 56 | 40 | 0 | 20 | 3 | 20 |
| 2000 | 5 | 4 | 6 | 40 | 1 | 8 | 53 | 20 | 0 | 21 | 6 | 40 |
| 2100 | 7 | 5 | 49 | 0 | 1 | 10 | 50 | 0 | 0 | 22 | 10 | 0 |
| 2200 | 9 | 7 | 31 | 20 | 1 | 12 | 46 | 40 | 0 | 23 | 13 | 20 |
| 2300 | 11 | 9 | 13 | 40 | 1 | 14 | 43 | 20 | 0 | 24 | 16 | 40 |
| 2400 | 1 | 10 | 56 | 0 | 1 | 16 | 40 | 0 | 0 | 25 | 20 | 0 |
| 2500 | 3 | 12 | 38 | 20 | 1 | 18 | 36 | 40 | 0 | 26 | 23 | 20 |
| 2600 | 5 | 14 | 20 | 40 | 1 | 20 | 33 | 20 | 0 | 27 | 26 | 40 |
| 2700 | 7 | 16 | 3 | 0 | 1 | 22 | 30 | 0 | 0 | 28 | 30 | 0 |
| 2800 | 9 | 17 | 45 | 20 | 1 | 24 | 26 | 40 | 0 | 29 | 33 | 20 |
| 2900 | 11 | 19 | 27 | 40 | 1 | 26 | 23 | 20 | 1 | 0 | 36 | 40 |
| 3000 | 1 | 21 | 10 | 0 | 1 | 28 | 20 | 0 | 1 | 1 | 40 | 0 |
| 3100 | 3 | 22 | 52 | 20 | 2 | 0 | 16 | 40 | 1 | 2 | 43 | 20 |
| 3200 | 5 | 24 | 34 | 40 | 2 | 2 | 13 | 20 | 1 | 3 | 46 | 40 |

## IN HORIS ET MIN.

| ″ / H | Medius Motus Martis. o | ′ | ″ | ‴ / H | o | ′ | ″ | ⁗ / H | o | ′ | ″ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 19 | 31 | 0 | 40 | 37 | | | | |
| 2 | 0 | 2 | 37 | 32 | 0 | 41 | 56 | | | | |
| 3 | 0 | 3 | 56 | 33 | 0 | 43 | 14 | | | | |
| 4 | 0 | 5 | 14 | 34 | 0 | 44 | 33 | | | | |
| 5 | 0 | 6 | 33 | 35 | 0 | 45 | 51 | | | | |
| 6 | 0 | 7 | 52 | 36 | 0 | 47 | 10 | | | | |
| 7 | 0 | 9 | 10 | 37 | 0 | 48 | 29 | | | | |
| 8 | 0 | 10 | 29 | 38 | 0 | 49 | 47 | | | | |
| 9 | 0 | 11 | 48 | 39 | 0 | 51 | 6 | | | | |
| 10 | 0 | 13 | 6 | 40 | 0 | 52 | 24 | | | | |
| 11 | 0 | 14 | 25 | 41 | 0 | 53 | 43 | | | | |
| 12 | 0 | 15 | 43 | 42 | 0 | 55 | 2 | | | | |
| 13 | 0 | 17 | 2 | 43 | 0 | 56 | 20 | | | | |
| 14 | 0 | 18 | 21 | 44 | 0 | 57 | 39 | | | | |
| 15 | 0 | 19 | 39 | 45 | 0 | 58 | 58 | | | | |
| 16 | 0 | 20 | 58 | 46 | 1 | 0 | 16 | | | | |
| 17 | 0 | 22 | 16 | 47 | 1 | 1 | 35 | | | | |
| 18 | 0 | 23 | 35 | 48 | 1 | 2 | 53 | | | | |
| 19 | 0 | 24 | 54 | 49 | 1 | 4 | 12 | | | | |
| 20 | 0 | 26 | 12 | 50 | 1 | 5 | 31 | | | | |
| 21 | 0 | 27 | 31 | 51 | 1 | 6 | 49 | | | | |
| 22 | 0 | 28 | 49 | 52 | 1 | 8 | 8 | | | | |
| 23 | 0 | 30 | 8 | 53 | 1 | 9 | 26 | | | | |
| 24 | 0 | 31 | 27 | 54 | 1 | 10 | 45 | | | | |
| 25 | 0 | 32 | 45 | 55 | 1 | 12 | 4 | | | | |
| 26 | 0 | 34 | 4 | 56 | 1 | 13 | 22 | | | | |
| 27 | 0 | 35 | 22 | 57 | 1 | 14 | 41 | | | | |
| 28 | 0 | 36 | 41 | 58 | 1 | 15 | 59 | | | | |
| 29 | 0 | 38 | 0 | 59 | 1 | 17 | 18 | | | | |
| 30 | 0 | 39 | 18 | 60 | 1 | 18 | 37 | | | | |

# TABULA ÆQUATIONUM MARTIS.

*Anomalia media Martis.*

| Gr. | Sig. 0. Subtr. ° ′ ″ | Differentia ′ ″ | Sig. I. Subtr. ° ′ ″ | Differentia. ′ ″ | Sig. II. Subtr ° ′ ″ | Differentia. ′ ″ | |
|---|---|---|---|---|---|---|---|
| 0 | 0 0 0 | | 4 50 1 | | 8 41 16 | | 30 |
| | | 10 0 | | 8 59 | | 6 1 | |
| 1 | 0 10 0 | | 4 59 0 | | 8 47 17 | | 29 |
| 2 | 0 19 59 | 9 59 | 5 7 55 | 8 55 | 8 53 10 | 5 53 | 28 |
| 3 | 0 29 58 | 9 59 | 5 16 46 | 8 51 | 8 58 54 | 5 44 | 27 |
| 4 | 0 39 57 | 9 59 | 5 25 32 | 8 46 | 9 4 30 | 5 36 | 26 |
| 5 | 0 49 55 | 9 58 | 5 34 14 | 8 42 | 9 9 58 | 5 28 | 25 |
| | | 9 58 | | 8 37 | | 5 20 | |
| 6 | 0 59 53 | | 5 42 51 | | 9 15 18 | | 24 |
| 7 | 1 9 50 | 9 57 | 5 51 24 | 8 33 | 9 20 29 | 5 11 | 23 |
| 8 | 1 19 46 | 9 56 | 5 59 52 | 8 28 | 9 25 31 | 5 2 | 22 |
| 9 | 1 29 41 | 9 55 | 6 8 15 | 8 23 | 9 30 24 | 4 53 | 21 |
| 10 | 1 39 35 | 9 54 | 6 16 33 | 8 18 | 9 35 9 | 4 45 | 20 |
| | | 9 52 | | 8 12 | | 4 36 | |
| 11 | 1 49 27 | | 6 24 45 | | 9 39 45 | | 19 |
| 12 | 1 59 18 | 9 51 | 6 32 52 | 8 7 | 9 44 11 | 4 26 | 18 |
| 13 | 2 9 7 | 9 49 | 6 40 53 | 8 1 | 9 48 28 | 4 17 | 17 |
| 14 | 2 18 55 | 9 48 | 6 48 49 | 7 56 | 9 52 36 | 4 8 | 16 |
| 15 | 2 28 41 | 9 46 | 6 56 40 | 7 51 | 9 56 34 | 3 58 | 15 |
| | | 9 44 | | 7 45 | | 3 48 | |
| 16 | 2 38 25 | | 7 4 25 | | 10 0 22 | | 14 |
| 17 | 2 48 7 | 9 42 | 7 12 4 | 7 39 | 10 4 0 | 3 38 | 13 |
| 18 | 2 57 46 | 9 39 | 7 19 36 | 7 32 | 10 7 29 | 3 29 | 12 |
| 19 | 3 7 23 | 9 37 | 7 27 2 | 7 26 | 10 10 48 | 3 19 | 11 |
| 20 | 3 16 59 | 9 36 | 7 34 22 | 7 20 | 10 13 57 | 3 9 | 10 |
| | | 9 32 | | 7 13 | | 2 58 | |
| 21 | 3 26 31 | | 7 41 35 | | 10 16 55 | | 9 |
| 22 | 3 36 0 | 9 29 | 7 48 41 | 7 6 | 10 19 43 | 2 48 | 8 |
| 23 | 3 45 27 | 9 27 | 7 55 40 | 6 59 | 10 22 21 | 2 38 | 7 |
| 24 | 3 54 50 | 9 23 | 8 2 33 | 6 53 | 10 24 49 | 2 28 | 6 |
| 25 | 4 4 10 | 9 20 | 8 9 18 | 6 45 | 10 27 6 | 2 17 | 5 |
| | | 9 18 | | 6 39 | | 2 6 | |
| 26 | 4 13 28 | | 8 15 57 | | 10 29 12 | | 4 |
| 27 | 4 22 42 | 9 14 | 8 22 28 | 6 31 | 10 31 7 | 1 55 | 3 |
| 28 | 4 31 52 | 9 10 | 8 28 52 | 6 23 | 10 32 51 | 1 44 | 2 |
| 29 | 4 40 58 | 9 6 | 8 35 8 | 6 16 | 10 34 24 | 1 33 | 1 |
| 30 | 4 50 1 | 9 3 | 8 41 16 | 6 8 | 10 35 46 | 1 22 | 0 |
| | Sig. XI. Adde. | Diff | Sig. X. Adde. | Diff. | Sig. IX. Adde. | Diff. | Gr. |

# TABULA ÆQUATIONUM MARTIS.

*Anomalia media Martis.*

| Gr. | Sig. III. Subtr. ° ′ ″ | Differentia. ′ ″ | Sig. IV. Subtr. ° ′ ″ | Differentia. ′ ″ | Sig. V. Subtr. ° ′ ″ | Differentia. ′ ″ | |
|---|---|---|---|---|---|---|---|
| 0 | 10 35 46 | | 9 44 59 | | 5 54 42 | | 30 |
| | | 1 11 | | 4 52 | | 10 22 | |
| 1 | 10 36 57 | | 9 40 7 | | 5 44 20 | | 29 |
| | | 1 0 | | 5 5 | | 10 30 | |
| 2 | 10 37 57 | | 9 35 2 | | 5 33 50 | | 28 |
| | | 0 48 | | 5 17 | | 10 39 | |
| 3 | 10 38 45 | | 9 29 45 | | 5 23 11 | | 27 |
| | | 0 36 | | 5 29 | | 10 47 | |
| 4 | 10 39 21 | | 9 24 16 | | 5 12 24 | | 26 |
| | | 0 25 | | 5 42 | | 10 55 | |
| 5 | 10 39 46 | | 9 18 34 | | 5 1 29 | | 25 |
| | | 0 14 | | 5 54 | | 11 2 | |
| 6 | 10 40 0 | | 9 12 40 | | 4 50 27 | | 24 |
| | | 0 2 | | 6 5 | | 11 9 | |
| 7 | 10 40 2 | | 9 6 35 | | 4 39 18 | | 23 |
| | | 0 10 | | 6 17 | | 11 16 | |
| 8 | 10 39 52 | | 9 0 18 | | 4 28 2 | | 22 |
| | | 0 22 | | 6 28 | | 11 23 | |
| 9 | 10 39 30 | | 8 53 50 | | 4 16 39 | | 21 |
| | | 0 33 | | 6 40 | | 11 29 | |
| 10 | 10 38 57 | | 8 47 10 | | 4 5 10 | | 20 |
| | | 0 45 | | 6 53 | | 11 36 | |
| 11 | 10 38 12 | | 8 40 17 | | 3 53 34 | | 19 |
| | | 0 58 | | 7 6 | | 11 42 | |
| 12 | 10 37 14 | | 8 33 11 | | 3 41 52 | | 18 |
| | | 1 10 | | 7 16 | | 11 47 | |
| 13 | 10 36 4 | | 8 25 55 | | 3 30 5 | | 17 |
| | | 1 21 | | 7 28 | | 11 54 | |
| 14 | 10 34 43 | | 8 18 27 | | 3 18 11 | | 16 |
| | | 1 34 | | 7 40 | | 11 58 | |
| 15 | 10 33 9 | | 8 10 47 | | 3 6 13 | | 15 |
| | | 1 47 | | 7 51 | | 12 2 | |
| 16 | 10 31 22 | | 8 2 56 | | 2 54 11 | | 14 |
| | | 1 58 | | 8 3 | | 12 7 | |
| 17 | 10 29 24 | | 7 54 53 | | 2 42 4 | | 13 |
| | | 2 10 | | 8 13 | | 12 13 | |
| 18 | 10 27 14 | | 7 46 40 | | 2 29 51 | | 12 |
| | | 2 23 | | 8 24 | | 12 16 | |
| 19 | 10 24 51 | | 7 38 16 | | 2 17 35 | | 11 |
| | | 2 36 | | 8 34 | | 12 19 | |
| 20 | 10 22 15 | | 7 29 42 | | 2 5 16 | | 10 |
| | | 2 48 | | 8 45 | | 12 22 | |
| 21 | 10 19 27 | | 7 20 57 | | 1 52 54 | | 9 |
| | | 3 0 | | 8 55 | | 12 25 | |
| 22 | 10 16 27 | | 7 12 2 | | 1 40 29 | | 8 |
| | | 3 12 | | 9 6 | | 12 27 | |
| 23 | 10 13 15 | | 7 2 56 | | 1 28 2 | | 7 |
| | | 3 25 | | 9 17 | | 12 30 | |
| 24 | 10 9 50 | | 6 53 39 | | 1 15 32 | | 6 |
| | | 3 37 | | 9 26 | | 12 32 | |
| 25 | 10 6 13 | | 6 44 13 | | 1 3 0 | | 5 |
| | | 3 50 | | 9 35 | | 12 34 | |
| 26 | 10 2 23 | | 6 34 38 | | 0 50 26 | | 4 |
| | | 4 2 | | 9 45 | | 12 35 | |
| 27 | 9 58 21 | | 6 24 53 | | 0 37 51 | | 3 |
| | | 4 15 | | 9 55 | | 12 37 | |
| 28 | 9 54 6 | | 6 14 58 | | 0 25 14 | | 2 |
| | | 4 27 | | 10 4 | | 12 37 | |
| 29 | 9 49 39 | | 6 4 54 | | 0 12 37 | | 1 |
| | | 4 40 | | 10 12 | | 12 37 | |
| 30 | 9 44 59 | | 5 54 42 | | 0 0 0 | | 0 |
| | Sig. VIII. Adde. | Diff. | Sig. VII Adde. | Diff. | Sig. VI. Adde. | Diff. | Gr. |

## *LOGARITHMI DISTANTIARUM MARTIS A SOLE.*

*Anomalia media Martis.*

| *Gr.* | Sig. 0. *Logar.* | *Differentia.* | Sig. I. *Logar.* | *Differentia.* | Sig. II. *Logar.* | *Differentia.* | |
|---|---|---|---|---|---|---|---|
| 0 | 5 221516 | | 5 217310 | | 5 205134 | | 30 |
| | | 5 | | 283 | | 528 | |
| 1 | 5 221511 | | 5 217027 | | 5 204606 | | 29 |
| | | 14 | | 292 | | 536 | |
| 2 | 5 221497 | | 5 216735 | | 5 204070 | | 28 |
| | | 24 | | 300 | | 543 | |
| 3 | 5 221473 | | 5 216435 | | 5 203527 | | 27 |
| | | 32 | | 309 | | 550 | |
| 4 | 5 221441 | | 5 216126 | | 5 202977 | | 26 |
| | | 43 | | 318 | | 556 | |
| 5 | 5 221398 | | 5 215808 | | 5 202421 | | 25 |
| | | 52 | | 327 | | 564 | |
| 6 | 5 221346 | | 5 215481 | | 5 201857 | | 24 |
| | | 61 | | 336 | | 570 | |
| 7 | 5 221285 | | 5 215145 | | 5 201287 | | 23 |
| | | 70 | | 344 | | 576 | |
| 8 | 5 221215 | | 5 214801 | | 5 200711 | | 22 |
| | | 80 | | 353 | | 583 | |
| 9 | 5 221135 | | 5 214448 | | 5 200128 | | 21 |
| | | 89 | | 361 | | 590 | |
| 10 | 5 221046 | | 5 214087 | | 5 199538 | | 20 |
| | | 99 | | 370 | | 596 | |
| 11 | 5 220947 | | 5 213717 | | 5 198942 | | 19 |
| | | 108 | | 379 | | 602 | |
| 12 | 5 220839 | | 5 213338 | | 5 198340 | | 18 |
| | | 118 | | 387 | | 608 | |
| 13 | 5 220721 | | 5 212951 | | 5 197732 | | 17 |
| | | 127 | | 395 | | 614 | |
| 14 | 5 220594 | | 5 212556 | | 5 197118 | | 16 |
| | | 136 | | 404 | | 619 | |
| 15 | 5 220458 | | 5 212152 | | 5 196499 | | 15 |
| | | 145 | | 412 | | 625 | |
| 16 | 5 220313 | | 5 211740 | | 5 195874 | | 14 |
| | | 155 | | 421 | | 630 | |
| 17 | 5 220158 | | 5 211319 | | 5 195244 | | 13 |
| | | 164 | | 429 | | 636 | |
| 18 | 5 219994 | | 5 210890 | | 5 194608 | | 12 |
| | | 173 | | 437 | | 641 | |
| 19 | 5 219821 | | 5 210453 | | 5 193967 | | 11 |
| | | 182 | | 444 | | 645 | |
| 20 | 5 219639 | | 5 210009 | | 5 193322 | | 10 |
| | | 192 | | 453 | | 651 | |
| 21 | 5 219447 | | 5 209556 | | 5 192671 | | 9 |
| | | 202 | | 461 | | 656 | |
| 22 | 5 219245 | | 5 209095 | | 5 192015 | | 8 |
| | | 210 | | 468 | | 660 | |
| 23 | 5 219035 | | 5 208627 | | 5 191355 | | 7 |
| | | 218 | | 475 | | 665 | |
| 24 | 5 218817 | | 5 208152 | | 5 190690 | | 6 |
| | | 229 | | 484 | | 669 | |
| 25 | 5 218588 | | 5 207668 | | 5 190021 | | 5 |
| | | 237 | | 493 | | 674 | |
| 26 | 5 218351 | | 5 207175 | | 5 189347 | | 4 |
| | | 247 | | 501 | | 677 | |
| 27 | 5 218104 | | 5 206674 | | 5 188670 | | 3 |
| | | 256 | | 507 | | 681 | |
| 28 | 5 217848 | | 5 206167 | | 5 187989 | | 2 |
| | | 265 | | 513 | | 685 | |
| 29 | 5 217583 | | 5 205654 | | 5 187304 | | 1 |
| | | 273 | | 520 | | 689 | |
| 30 | 5 217310 | | 5 205134 | | 5 186615 | | 0 |
| | Sig. XI. | *Diff.* | Sig. X. | *Diff.* | Sig. IX. | *Diff.* | *Gr.* |

## LOGARITHMI DISTANTIARUM MARTIS A SOLE.

*Anomalia media Martis.*

| Gr. | Sig. III. Logar. | Differentia. | Sig. IV. Logar. | Differentia. | Sig. V. Logar. | Differentia | |
|---|---|---|---|---|---|---|---|
| 0 | 5 186615 | | 5 165366 | | 5 147586 | | 30 |
| | | 691 | | 690 | | 444 | |
| 1 | 5 185924 | | 5 164676 | | 5 147142 | | 29 |
| | | 695 | | 686 | | 432 | |
| 2 | 5 185229 | | 5 163990 | | 5 146710 | | 28 |
| | | 698 | | 681 | | 419 | |
| 3 | 5 184531 | | 5 163309 | | 5 146291 | | 27 |
| | | 700 | | 677 | | 406 | |
| 4 | 5 183831 | | 5 162632 | | 5 145885 | | 26 |
| | | 703 | | 672 | | 393 | |
| 5 | 5 183128 | | 5 161960 | | 5 145492 | | 25 |
| | | 705 | | 667 | | 379 | |
| 6 | 5 182423 | | 5 161293 | | 5 145113 | | 24 |
| | | 707 | | 662 | | 366 | |
| 7 | 5 181716 | | 5 160631 | | 5 144747 | | 23 |
| | | 710 | | 656 | | 352 | |
| 8 | 5 181006 | | 5 159975 | | 5 144395 | | 22 |
| | | 711 | | 650 | | 338 | |
| 9 | 5 180295 | | 5 159325 | | 5 144057 | | 21 |
| | | 713 | | 643 | | 323 | |
| 10 | 5 179582 | | 5 158682 | | 5 143734 | | 20 |
| | | 714 | | 637 | | 309 | |
| 11 | 5 178868 | | 5 158045 | | 5 143425 | | 19 |
| | | 715 | | 630 | | 294 | |
| 12 | 5 178153 | | 5 157415 | | 5 143131 | | 18 |
| | | 716 | | 623 | | 279 | |
| 13 | 5 177437 | | 5 156792 | | 5 142852 | | 17 |
| | | 716 | | 615 | | 265 | |
| 14 | 5 176721 | | 5 156177 | | 5 142587 | | 16 |
| | | 717 | | 607 | | 249 | |
| 15 | 5 176004 | | 5 155570 | | 5 142338 | | 15 |
| | | 717 | | 599 | | 234 | |
| 16 | 5 175287 | | 5 154971 | | 5 142104 | | 14 |
| | | 717 | | 591 | | 218 | |
| 17 | 5 174570 | | 5 154380 | | 5 141886 | | 13 |
| | | 717 | | 583 | | 203 | |
| 18 | 5 173853 | | 5 153797 | | 5 141683 | | 12 |
| | | 716 | | 574 | | 187 | |
| 19 | 5 173137 | | 5 153223 | | 5 141496 | | 11 |
| | | 716 | | 564 | | 171 | |
| 20 | 5 172421 | | 5 152659 | | 5 141325 | | 10 |
| | | 715 | | 555 | | 155 | |
| 21 | 5 171706 | | 5 152104 | | 5 141170 | | 9 |
| | | 714 | | 545 | | 139 | |
| 22 | 5 170992 | | 5 151559 | | 5 141031 | | 8 |
| | | 711 | | 535 | | 123 | |
| 23 | 5 170281 | | 5 151024 | | 5 140908 | | 7 |
| | | 709 | | 524 | | 107 | |
| 24 | 5 169572 | | 5 150500 | | 5 140801 | | 6 |
| | | 707 | | 514 | | 90 | |
| 25 | 5 168865 | | 5 149986 | | 5 140711 | | 5 |
| | | 705 | | 503 | | 74 | |
| 26 | 5 168160 | | 5 149483 | | 5 140637 | | 4 |
| | | 703 | | 492 | | 58 | |
| 27 | 5 167457 | | 5 148991 | | 5 140579 | | 3 |
| | | 701 | | 480 | | 41 | |
| 28 | 5 166756 | | 5 148511 | | 5 140538 | | 2 |
| | | 698 | | 468 | | 25 | |
| 29 | 5 166058 | | 5 148043 | | 5 140513 | | 1 |
| | | 692 | | 457 | | 8 | |
| 30 | 5 165366 | | 5 147586 | | 5 140505 | | 0 |
| | Sig. VIII. | *Diff.* | Sig. VII. | *Diff.* | Sig. VI. | *Diff.* | *Gr.* |

# TABULA LATITUDINARIA MARTIS.

| Argument. Latitudinis. | Sig. 0. Bor. Sig. 6. Aust | Subtr. | Curtatio | Sig. 1. Bor. Sig. 7. Aust. | Subtr. | Curtatio | Sig. 2. Bor. Sig. 8. Aust. | Subtr. | Curtatio | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Inclinatio. | Reduct. | | Inclinatio. | Reduct. | | Inclinatio. | Reduct. | | |
| Gr. | ° ′ ″ | ′ ″ | Log. | ° ′ ″ | ′ ″ | Log | ° ′ ″ | ′ ″ | Log. | |
| 0 | 0 0 0 | 0 0 | 0 | 0 55 29 | 0 47 | 56 | 1 36 8 | 0 47 | 170 | 30 |
| 1 | 0 1 56 | 0 2 | 0 | 0 57 10 | 0 48 | 60 | 1 37 5 | 0 46 | 173 | 29 |
| 2 | 0 3 53 | 0 4 | 0 | 0 58 49 | 0 49 | 64 | 1 38 0 | 0 45 | 176 | 28 |
| 3 | 0 5 48 | 0 6 | 1 | 1 0 27 | 0 49 | 67 | 1 38 54 | 0 44 | 180 | 27 |
| 4 | 0 7 44 | 0 7 | 1 | 1 2 4 | 0 50 | 71 | 1 39 46 | 0 43 | 183 | 26 |
| 5 | 0 9 40 | 0 9 | 2 | 1 3 40 | 0 51 | 74 | 1 40 36 | 0 41 | 186 | 25 |
| 6 | 0 11 36 | 0 11 | 2 | 1 5 14 | 0 51 | 78 | 1 41 24 | 0 40 | 189 | 24 |
| 7 | 0 13 32 | 0 13 | 3 | 1 6 48 | 0 52 | 82 | 1 42 10 | 0 39 | 192 | 23 |
| 8 | 0 15 27 | 0 15 | 4 | 1 8 20 | 0 52 | 86 | 1 42 55 | 0 37 | 195 | 22 |
| 9 | 0 17 22 | 0 17 | 5 | 1 9 51 | 0 53 | 90 | 1 43 38 | 0 36 | 197 | 21 |
| 10 | 0 19 16 | 0 18 | 7 | 1 11 20 | 0 53 | 93 | 1 44 18 | 0 35 | 200 | 20 |
| 11 | 0 21 10 | 0 20 | 8 | 1 12 49 | 0 53 | 97 | 1 44 57 | 0 33 | 202 | 19 |
| 12 | 0 23 4 | 0 22 | 10 | 1 14 16 | 0 54 | 101 | 1 45 34 | 0 32 | 205 | 18 |
| 13 | 0 24 58 | 0 24 | 11 | 1 15 42 | 0 54 | 105 | 1 46 9 | 0 30 | 207 | 17 |
| 14 | 0 26 51 | 0 25 | 13 | 1 17 6 | 0 54 | 109 | 1 46 42 | 0 29 | 209 | 16 |
| 15 | 0 28 43 | 0 27 | 15 | 1 18 29 | 0 54 | 113 | 1 47 13 | 0 27 | 211 | 15 |
| 16 | 0 30 35 | 0 29 | 17 | 1 19 50 | 0 54 | 117 | 1 47 42 | 0 25 | 213 | 14 |
| 17 | 0 32 27 | 0 30 | 19 | 1 21 10 | 0 54 | 121 | 1 48 9 | 0 24 | 215 | 13 |
| 18 | 0 34 18 | 0 32 | 22 | 1 22 29 | 0 54 | 125 | 1 48 35 | 0 22 | 217 | 12 |
| 19 | 0 36 8 | 0 33 | 24 | 1 23 46 | 0 53 | 129 | 1 48 58 | 0 20 | 218 | 11 |
| 20 | 0 37 57 | 0 35 | 27 | 1 25 1 | 0 53 | 133 | 1 49 19 | 0 18 | 220 | 10 |
| 21 | 0 39 46 | 0 36 | 29 | 1 26 15 | 0 53 | 137 | 1 49 38 | 0 17 | 221 | 9 |
| 22 | 0 41 34 | 0 37 | 32 | 1 27 28 | 0 52 | 141 | 1 49 55 | 0 15 | 222 | 8 |
| 23 | 0 43 22 | 0 39 | 34 | 1 28 38 | 0 52 | 144 | 1 50 10 | 0 13 | 223 | 7 |
| 24 | 0 45 8 | 0 40 | 37 | 1 29 48 | 0 51 | 148 | 1 50 23 | 0 11 | 224 | 6 |
| 25 | 0 46 54 | 0 41 | 40 | 1 30 55 | 0 51 | 152 | 1 50 35 | 0 9 | 225 | 5 |
| 26 | 0 48 39 | 0 43 | 43 | 1 32 1 | 0 50 | 155 | 1 50 44 | 0 7 | 225 | 4 |
| 27 | 0 50 23 | 0 44 | 47 | 1 33 5 | 0 49 | 159 | 1 50 51 | 0 6 | 226 | 3 |
| 28 | 0 52 6 | 0 45 | 50 | 1 34 7 | 0 49 | 163 | 1 50 56 | 0 4 | 226 | 2 |
| 29 | 0 53 48 | 0 46 | 53 | 1 35 8 | 0 48 | 166 | 1 50 59 | 0 2 | 226 | 1 |
| 30 | 0 55 29 | 0 47 | 56 | 1 36 8 | 0 47 | 170 | 1 51 0 | 0 0 | 226 | 0 |
| | Sig. 11. Aust. Sig. 5. Bor. | Adde. | | Sig. 10. Aust. Sig. 4. Bor. | Adde. | | Sig. 9. Aust. Sig. 3. Bor. | Adde. | | Gr. |

## SERIES OPPOSITIONUM SOLIS ET MARTIS NOSTRA ÆTATE FACTARUM CUM COMPUTO PRÆCEDENTE COLLATA.

| *Oppositionum Tempora æquata* Londini. | | | *Locus Solis verus.* | | | *Anom. med. Martis.* | | | | *Mars Heliocentricus comp.* | | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D. | H. | ′ | ° | ′ | ″ | S | ° | ′ | ″ | | ° | ′ | ″ | ′ | ″ |
| 1657 | *Sept.* 27 | 11 | 11 | ♎ | 15 | 3 | 36 | 7 | 8 | 5 | 51 | ♈ | 15 | 3 | 36 | * | * |
| 1659 | *Nov.* 21 | 11 | 33 | ♐ | 9 | 51 | 2 | 8 | 29 | 27 | 36 | ♊ | 9 | 49 | 56 | −1 | 6 |
| 1661 | *Dec.* 30 | 6 | 0 | ♑ | 19 | 52 | 14 | 10 | 12 | 49 | 57 | ♋ | 19 | 51 | 32 | −0 | 42 |
| 1664 | *Feb.* 2 | 18 | 33 | ♒ | 24 | 24 | 31 | 11 | 23 | 27 | 22 | ♌ | 24 | 24 | 31 | * | * |
| 1666 | *Mart.* 8 | 12 | 6 | ♓ | 28 | 39 | 49 | 1 | 4 | 11 | 21 | ♍ | 28 | 38 | 57 | −0 | 52 |
| 1668 | *Apr.* 16 | 19 | 5 | ♉ | 7 | 39 | 52 | 2 | 17 | 50 | 8 | ♎ | 7 | 39 | 51 | * | * |
| 1670 | *Jun.* 11 | 15 | 38 | ♋ | 0 | 46 | 42 | 4 | 9 | 38 | 20 | ♑ | 0 | 46 | 43 | +0 | 1 |
| 1672 | *Aug.* 29 | 11 | 24 | ♍ | 16 | 56 | 4 | 6 | 14 | 0 | 1 | ♓ | 16 | 56 | 26 | +0 | 22 |
| 1674 | *Nov.* 2 | 16 | 52 | ♎ | 21 | 11 | 32 | 8 | 10 | 42 | 53 | ♉ | 21 | 10 | 51 | −0 | 41 |
| 1676 | *Dec.* 15 | 19 | 5 | ♑ | 5 | 29 | 55 | 9 | 26 | 21 | 11 | ♋ | 5 | 29 | 36 | −0 | 19 |
| 1679 | *Jan.* 20 | 14 | 50 | ♒ | 11 | 27 | 59 | 11 | 7 | 39 | 29 | ♌ | 11 | 27 | 27 | −0 | 32 |
| 1681 | *Feb.* 22 | 16 | 18 | ♓ | 15 | 16 | 16 | 0 | 18 | 2 | 25 | ♍ | 15 | 16 | 21 | +0 | 5 |
| 1683 | *Mart.* 31 | 23 | 31 | ♈ | 21 | 39 | 18 | 2 | 0 | 7 | 10 | ♎ | 21 | 39 | 41 | +0 | 23 |
| 1685 | *Maii* 18 | 1 | 0 | ♊ | 7 | 38 | 15 | 3 | 17 | 50 | 19 | ♐ | 7 | 38 | 23 | +0 | 8 |
| 1687 | *Jul.* 29 | 1 | 0 | ♌ | 15 | 56 | 5 | 5 | 18 | 6 | 1 | ♒ | 15 | 56 | 11 | +0 | 6 |
| 1689 | *Oct.* 11 | 17 | 20 | ♎ | 29 | 28 | 52 | 7 | 20 | 17 | 29 | ♈ | 29 | 28 | 34 | −0 | 18 |
| 1691 | *Dec.* 1 | 3 | 6 | ♐ | 19 | 53 | 50 | 9 | 9 | 14 | 56 | ♊ | 19 | 53 | 36 | −0 | 14 |
| 1694 | *Jan.* 7 | 4 | 47 | ♑ | 28 | 11 | 52 | 10 | 21 | 43 | 18 | ♋ | 28 | 11 | 17 | −0 | 35 |
| 1696 | *Feb.* 10 | 9 | 0 | ♓ | 2 | 18 | 4 | 0 | 2 | 38 | 37 | ♍ | 2 | 17 | 27 | −0 | 37 |
| 1698 | *Mart.* 16 | 18 | 20 | ♈ | 7 | 4 | 17 | 1 | 13 | 14 | 27 | ♎ | 7 | 3 | 47 | −0 | 30 |
| 1700 | *Apr.* 27 | 7 | 40 | ♉ | 18 | 5 | 16 | 2 | 28 | 4 | 28 | ♌ | 18 | 5 | 10 | −0 | 6 |
| 1702 | *Jun.* 27 | 12 | 50 | ♋ | 16 | 10 | 10 | 4 | 22 | 41 | 8 | ♑ | 16 | 10 | 46 | +0 | 36 |
| 1704 | *Sept.* 15 | 9 | 54 | ♎ | 3 | 45 | 46 | 6 | 27 | 36 | 0 | ♈ | 3 | 45 | 18 | −0 | 28 |
| 1706 | *Nov.* 13 | 16 | 23 | ♐ | 2 | 32 | 1 | 8 | 21 | 11 | 33 | ♊ | 2 | 32 | 1 | * | * |
| 1708 | *Dec.* 24 | 4 | 48 | ♑ | 14 | 18 | 4 | 10 | 5 | 28 | 51 | ♋ | 14 | 18 | 4 | * | * |
| 1711 | *Jan.* 28 | 5 | 22 | ♒ | 19 | 24 | 6 | 11 | 16 | 22 | 2 | ♌ | 19 | 23 | 40 | −0 | 26 |
| 1713 | *Mart.* 2 | 12 | 54 | ♓ | 23 | 20 | 30 | 0 | 26 | 52 | 53 | ♍ | 23 | 20 | 50 | +0 | 20 |
| 1715 | *Apr.* 10 | 8 | 46 | ♉ | 1 | 3 | 19 | 2 | 9 | 45 | 40 | ♎ | 1 | 3 | 19 | * | * |
| 1717 | *Maii* 31 | 9 | 20 | ♊ | 20 | 38 | 46 | 3 | 29 | 33 | 21 | ♐ | 20 | 39 | 7 | +0 | 21 |
| 1719 | *Aug.* 16 | 11 | 41 | ♍ | 3 | 57 | 30 | 6 | 2 | 29 | 22 | ♓ | 3 | 57 | 30 | * | * |

*Oppositiones quibus Nota* * * *apponitur, ob defectum accuratarum Observationum, ex noſtro Calculo ſupplevimus.*

| Annis Juliani ineuntibus. | Jupiter ab Æquinoct. | Aphel. ♈ ♑ 8° | Nod. ♈ ♋ 7° |
|---|---|---|---|
| | S ° ′ ″ | ° ′ ″ | ′ ″ |
| 1661 | 6 2 33 57 | 47 0 | 1 40 |
| 62 | 7 2 54 35 | 48 12 | 2 30 |
| 63 | 8 3 15 13 | 49 24 | 3 20 |
| 64 | 9 3 35 51 | 50 36 | 4 10 |
| 1665 | 10 4 1 29 | 51 48 | 5 0 |
| 1666 | 11 4 22 7 | 53 0 | 5 50 |
| 67 | 0 4 42 45 | 54 12 | 6 40 |
| 68 | 1 5 3 23 | 55 24 | 7 30 |
| 69 | 2 5 29 0 | 56 36 | 8 20 |
| 1670 | 3 5 49 38 | 57 48 | 9 10 |
| 1671 | 4 6 10 16 | 59 0 | 10 0 |
| 72 | 5 6 30 54 | 9 0 12 | 10 50 |
| 73 | 6 6 56 32 | ♑ 1 24 | 11 40 |
| 74 | 7 7 17 10 | 2 36 | 12 30 |
| 1675 | 8 7 37 48 | 3 48 | 13 20 |
| 1676 | 9 7 58 26 | 5 0 | 14 10 |
| 77 | 10 8 24 3 | 6 12 | 15 0 |
| 78 | 11 8 44 42 | 7 24 | 15 50 |
| 79 | 0 9 5 20 | 8 36 | 16 40 |
| 1680 | 1 9 25 58 | 9 48 | 17 30 |
| 1681 | 2 9 51 35 | 11 0 | 18 20 |
| 82 | 3 10 12 13 | 12 12 | 19 10 |
| 83 | 4 10 32 51 | 13 24 | 20 0 |
| 84 | 5 10 53 29 | 14 36 | 20 50 |
| 1685 | 6 11 19 7 | 15 48 | 21 40 |
| 1686 | 7 11 39 45 | 17 0 | 22 30 |
| 87 | 8 12 0 23 | 18 12 | 23 20 |
| 88 | 9 12 21 1 | 19 24 | 24 10 |
| 89 | 10 12 46 38 | 20 36 | 25 0 |
| 1690 | 11 13 7 16 | 21 48 | 25 50 |
| 1691 | 0 13 27 54 | 23 0 | 26 40 |
| 92 | 1 13 48 32 | 24 12 | 27 30 |
| 93 | 2 14 14 10 | 25 24 | 28 20 |
| 94 | 3 14 34 48 | 26 36 | 29 10 |
| 1695 | 4 14 55 26 | 27 48 | 30 0 |

| Annis Juliani ineuntibus. | Jupiter ab Æquinoct. | Aphel. ♈ ♑ 9° | Nod. ♈ ♋ 7° |
|---|---|---|---|
| | S ° ′ ″ | ° ′ ″ | ′ ″ |
| 1696 | 5 15 16 4 | 29 0 | 30 50 |
| 97 | 6 15 41 41 | 30 12 | 31 40 |
| 98 | 7 16 2 20 | 31 24 | 32 30 |
| 99 | 8 16 22 58 | 32 36 | 33 20 |
| 1700 | 9 16 43 36 | 33 48 | 34 10 |
| 1701 | 10 17 9 13 | 35 0 | 35 0 |
| 2 | 11 17 29 51 | 36 12 | 35 50 |
| 3 | 0 17 50 29 | 37 24 | 36 40 |
| 4 | 1 18 11 7 | 38 36 | 37 30 |
| 1705 | 2 18 36 45 | 39 48 | 38 20 |
| 1706 | 3 18 57 23 | 41 0 | 39 10 |
| 7 | 4 19 18 1 | 42 12 | 40 0 |
| 8 | 5 19 38 39 | 43 24 | 40 50 |
| 9 | 6 20 4 16 | 44 36 | 41 40 |
| 1710 | 7 20 24 54 | 45 48 | 42 30 |
| 1711 | 8 20 45 32 | 47 0 | 43 20 |
| 12 | 9 21 6 10 | 48 12 | 44 10 |
| 13 | 10 21 31 48 | 49 24 | 45 0 |
| 14 | 11 21 52 26 | 50 36 | 45 50 |
| 1715 | 0 22 13 4 | 51 48 | 46 40 |
| 1716 | 1 22 33 42 | 53 0 | 47 30 |
| 17 | 2 22 59 19 | 54 12 | 48 20 |
| 18 | 3 23 19 57 | 55 24 | 49 10 |
| 19 | 4 23 40 36 | 56 36 | 50 0 |
| 1720 | 5 24 1 13 | 57 48 | 50 50 |
| 1721 | 6 24 26 51 | 59 0 | 51 40 |
| 22 | 7 24 47 29 | 10 0 12 | 52 30 |
| 23 | 8 25 8 7 | ♑ 1 24 | 53 20 |
| 24 | 9 25 28 45 | 2 36 | 54 10 |
| 1725 | 10 25 54 23 | 3 48 | 55 0 |
| 1726 | 11 26 15 1 | 5 0 | 55 50 |
| 27 | 0 26 35 39 | 6 12 | 56 40 |
| 28 | 1 26 56 17 | 7 24 | 57 30 |
| 29 | 2 27 21 54 | 8 36 | 58 20 |
| 1730 | 3 27 42 32 | 9 48 | 59 10 |

# EPOCHÆ MEDIORUM MOTUUM JOVIS.

| Annis Juli-anis ineun-tibus. | Jupiter ab Æquinoct. | | | | Aph. ♃ ♎ 10° | | Nod. ♃ ♋ 8° | |
|---|---|---|---|---|---|---|---|---|
| | s | o | ′ | ″ | ′ | ″ | ′ | ″ |
| 1731 | 4 | 28 | 3 | 10 | 11 | 0 | 0 | 0 |
| 32 | 5 | 28 | 23 | 48 | 12 | 12 | 0 | 50 |
| 33 | 6 | 28 | 49 | 26 | 13 | 24 | 1 | 40 |
| 34 | 7 | 29 | 10 | 4 | 14 | 36 | 2 | 30 |
| 1735 | 8 | 29 | 30 | 42 | 15 | 48 | 3 | 20 |
| 1736 | 9 | 29 | 51 | 20 | 17 | 0 | 4 | 10 |
| 37 | 11 | 0 | 16 | 57 | 18 | 12 | 5 | 0 |
| 38 | 0 | 0 | 37 | 36 | 19 | 24 | 5 | 50 |
| 39 | 1 | 0 | 58 | 14 | 20 | 36 | 6 | 40 |
| 1740 | 2 | 1 | 18 | 52 | 21 | 48 | 7 | 30 |
| 1741 | 3 | 1 | 44 | 29 | 23 | 0 | 8 | 20 |
| 42 | 4 | 2 | 5 | 7 | 24 | 12 | 9 | 10 |
| 43 | 5 | 2 | 25 | 45 | 25 | 24 | 10 | 0 |
| 44 | 6 | 2 | 46 | 23 | 26 | 36 | 10 | 50 |
| 1745 | 7 | 3 | 12 | 1 | 27 | 48 | 11 | 40 |
| 1746 | 8 | 3 | 32 | 39 | 29 | 0 | 12 | 30 |
| 47 | 9 | 3 | 53 | 18 | 30 | 12 | 13 | 20 |
| 48 | 10 | 4 | 13 | 56 | 31 | 24 | 14 | 10 |
| 49 | 11 | 4 | 39 | 33 | 32 | 36 | 15 | 0 |
| 1750 | 0 | 5 | 0 | 11 | 33 | 48 | 15 | 50 |
| 1751 | 1 | 5 | 20 | 49 | 35 | 0 | 16 | 40 |
| 52 | 2 | 5 | 41 | 27 | 36 | 12 | 17 | 30 |
| 53 | 3 | 6 | 7 | 5 | 37 | 24 | 18 | 20 |
| 54 | 4 | 6 | 27 | 43 | 38 | 36 | 19 | 10 |
| 1755 | 5 | 6 | 48 | 21 | 39 | 48 | 20 | 0 |
| 1756 | 6 | 7 | 8 | 59 | 41 | 0 | 20 | 50 |
| 57 | 7 | 7 | 34 | 36 | 42 | 12 | 21 | 40 |
| 58 | 8 | 7 | 55 | 15 | 43 | 24 | 22 | 30 |
| 59 | 9 | 8 | 15 | 53 | 44 | 36 | 23 | 20 |
| 1760 | 10 | 8 | 36 | 31 | 45 | 48 | 24 | 10 |
| 1761 | 11 | 9 | 2 | 8 | 47 | 0 | 25 | 0 |
| 62 | 0 | 9 | 22 | 46 | 48 | 12 | 25 | 50 |
| 63 | 1 | 9 | 43 | 24 | 49 | 24 | 26 | 40 |
| 64 | 2 | 10 | 4 | 2 | 50 | 36 | 27 | 30 |
| 1765 | 3 | 10 | 29 | 40 | 51 | 48 | 28 | 20 |

| Annis Juli-anis ineun-tibus. | Jupiter ab Æquinoct. | | | | Aphel. ♃ ♎ 10° | | Nod. ♃ ♋ 8° | |
|---|---|---|---|---|---|---|---|---|
| | s | o | ′ | ″ | ′ | ″ | ′ | ″ |
| 1766 | 4 | 10 | 50 | 18 | 53 | 0 | 29 | 10 |
| 67 | 5 | 11 | 10 | 56 | 54 | 12 | 30 | 0 |
| 68 | 6 | 11 | 31 | 34 | 55 | 24 | 30 | 50 |
| 69 | 7 | 11 | 57 | 11 | 56 | 36 | 31 | 40 |
| 1770 | 8 | 12 | 17 | 49 | 57 | 48 | 32 | 30 |
| 1771 | 9 | 12 | 38 | 27 | 59 | 0 | 33 | 20 |
| 72 | 10 | 12 | 59 | 5 | 11 | 0 | 12 | 34 | 10 |
| 73 | 11 | 13 | 24 | 43 | ♏ 1 | 24 | 35 | 0 |
| 74 | 0 | 13 | 45 | 21 | 2 | 36 | 35 | 50 |
| 1775 | 1 | 14 | 5 | 59 | 3 | 48 | 36 | 40 |
| 1776 | 2 | 14 | 26 | 37 | 5 | 0 | 37 | 30 |
| 77 | 3 | 14 | 52 | 14 | 6 | 12 | 38 | 20 |
| 78 | 4 | 15 | 12 | 53 | 7 | 24 | 39 | 10 |
| 79 | 5 | 15 | 33 | 31 | 8 | 36 | 40 | 0 |
| 1780 | 6 | 15 | 54 | 9 | 9 | 48 | 40 | 50 |
| 1781 | 7 | 16 | 19 | 46 | 11 | 0 | 41 | 40 |
| 82 | 8 | 16 | 40 | 24 | 12 | 12 | 42 | 30 |
| 83 | 9 | 17 | 1 | 2 | 13 | 24 | 43 | 20 |
| 84 | 10 | 17 | 21 | 40 | 14 | 36 | 44 | 10 |
| 1785 | 11 | 17 | 47 | 18 | 15 | 48 | 45 | 0 |
| 1786 | 0 | 18 | 7 | 56 | 17 | 0 | 45 | 50 |
| 87 | 1 | 18 | 28 | 34 | 18 | 12 | 46 | 40 |
| 88 | 2 | 18 | 49 | 12 | 19 | 24 | 47 | 30 |
| 89 | 3 | 19 | 14 | 49 | 20 | 36 | 48 | 20 |
| 1790 | 4 | 19 | 35 | 27 | 21 | 48 | 49 | 10 |
| 1791 | 5 | 19 | 56 | 5 | 23 | 0 | 50 | 0 |
| 92 | 6 | 20 | 16 | 43 | 24 | 12 | 50 | 50 |
| 93 | 7 | 20 | 42 | 21 | 25 | 24 | 51 | 40 |
| 94 | 8 | 21 | 2 | 59 | 26 | 36 | 52 | 30 |
| 1795 | 9 | 21 | 23 | 37 | 27 | 48 | 53 | 20 |
| 1796 | 10 | 21 | 44 | 15 | 29 | 0 | 54 | 10 |
| 97 | 11 | 22 | 9 | 52 | 30 | 12 | 55 | 0 |
| 98 | 0 | 22 | 30 | 31 | 31 | 24 | 55 | 50 |
| 99 | 1 | 22 | 51 | 9 | 32 | 36 | 56 | 40 |
| 1800 | 2 | 23 | 11 | 47 | 33 | 48 | 57 | 30 |

## *MEDIUS MOTUS JOVIS AD DIES MENSIUM.*

| *Die Mensis.* | JANUAR. *Med. Mot. Jovis.* | FEBRUA. *Med. Mot. Jovis.* | MARTII *Med. Mot. Jovis.* | APRILIS *Med. Mot. Jovis.* | MAII *Med. Mot. Jovis.* | JUNII *Med. Mot. Jovis.* |
|---|---|---|---|---|---|---|
| | ° ′ ″ | ° ′ ″ | ° ′ ″ | ° ′ ″ | ° ′ ″ | ° ′ ″ |
| 1 | 0 4 59 | 2 39 37 | 4 59 17 | 7 33 55 | 10 3 33 | 12 38 11 |
| 2 | 0 9 59 | 2 44 36 | 5 4 16 | 7 38 54 | 10 8 33 | 12 43 10 |
| 3 | 0 14 58 | 2 49 36 | 5 9 16 | 7 43 53 | 10 13 32 | 12 48 10 |
| 4 | 0 19 57 | 2 54 35 | 5 14 15 | 7 48 53 | 10 18 31 | 12 53 9 |
| 5 | 0 24 56 | 2 59 34 | 5 19 14 | 7 53 52 | 10 23 30 | 12 58 8 |
| 6 | 0 29 56 | 3 4 33 | 5 24 13 | 7 58 51 | 10 28 30 | 13 3 7 |
| 7 | 0 34 55 | 3 9 33 | 5 29 13 | 8 3 50 | 10 33 29 | 13 8 7 |
| 8 | 0 39 54 | 3 14 32 | 5 34 12 | 8 8 50 | 10 38 28 | 13 13 6 |
| 9 | 0 44 54 | 3 19 31 | 5 39 11 | 8 13 49 | 10 43 28 | 13 18 5 |
| 10 | 0 49 53 | 3 24 31 | 5 44 11 | 8 18 48 | 10 48 27 | 13 23 5 |
| 11 | 0 54 52 | 3 29 30 | 5 49 10 | 8 23 48 | 10 53 26 | 13 28 4 |
| 12 | 0 59 51 | 3 34 29 | 5 54 9 | 8 28 47 | 10 58 25 | 13 33 3 |
| 13 | 1 4 51 | 3 39 28 | 5 59 8 | 8 33 46 | 11 3 25 | 13 38 2 |
| 14 | 1 9 50 | 3 44 28 | 6 4 8 | 8 38 45 | 11 8 24 | 13 43 2 |
| 15 | 1 14 49 | 3 49 27 | 6 9 7 | 8 43 45 | 11 13 23 | 13 48 1 |
| 16 | 1 19 49 | 3 54 26 | 6 14 6 | 8 48 44 | 11 18 23 | 13 53 0 |
| 17 | 1 24 48 | 3 59 26 | 6 19 6 | 8 53 43 | 11 23 22 | 13 58 0 |
| 18 | 1 29 47 | 4 4 25 | 6 24 5 | 8 58 43 | 11 28 21 | 14 2 59 |
| 19 | 1 34 46 | 4 9 24 | 6 29 4 | 9 3 42 | 11 33 20 | 14 7 58 |
| 20 | 1 39 46 | 4 14 23 | 6 34 3 | 9 8 41 | 11 38 20 | 14 12 57 |
| 21 | 1 44 45 | 4 19 23 | 6 39 3 | 9 13 40 | 11 43 19 | 14 17 57 |
| 22 | 1 49 44 | 4 24 22 | 6 44 2 | 9 18 40 | 11 48 18 | 14 22 56 |
| 23 | 1 54 44 | 4 29 21 | 6 49 1 | 9 23 39 | 11 53 18 | 14 27 55 |
| 24 | 1 59 43 | 4 34 21 | 6 54 1 | 9 28 38 | 11 58 17 | 14 32 55 |
| 25 | 2 4 42 | 4 39 20 | 6 59 0 | 9 33 38 | 12 3 16 | 14 37 54 |
| 26 | 2 9 41 | 4 44 19 | 7 3 59 | 9 38 37 | 12 8 15 | 14 42 53 |
| 27 | 2 14 41 | 4 49 18 | 7 8 58 | 9 43 36 | 12 13 15 | 14 47 52 |
| 28 | 2 19 40 | 4 54 18 | 7 13 58 | 9 48 35 | 12 18 14 | 14 52 52 |
| 29 | 2 24 39 | *In Anno* Bissextili *post* Februarium *adde unius diei motum.* | 7 18 57 | 9 53 35 | 12 23 13 | 14 57 51 |
| 30 | 2 29 38 | | 7 23 56 | 9 58 34 | 12 28 12 | 15 2 50 |
| 31 | 2 34 38 | ′ ″ | 7 28 55 | ′ ″ | 12 33 12 | ′ ″ |
| *Mot. Aphel.* | 0 6 | 0 12 | 0 18 | 0 24 | 0 30 | 0 36 |
| *Mot. Nodi* | 0 4 | 0 8 | 0 12 | 0 16 | 0 21 | 0 25 |

## *MEDIUS MOTUS JOVIS AD DIES MENSIUM.*

| *Die Mensis.* | JULII | AUGUST. | SEPTEM. | OCTOB. | NOVEM. | DECEMB. |
|---|---|---|---|---|---|---|
| | *Med. Mot. Jovis.* | *Med. Mot. Jovis.* | *Med. Mot. Jovis.* | *Med. Mot. Jovis.* | *Med. Mot. Jovis.* | *Med. Mot. Jovis.* |
| | ° ′ ″ | ° ′ ″ | ° ′ ″ | ° ′ ″ | ° ′ ″ | ° ′ ″ |
| 1 | 15 7 50 | 17 42 27 | 20 17 5 | 22 46 44 | 25 21 21 | 27 51 0 |
| 2 | 15 12 49 | 17 47 27 | 20 22 4 | 22 51 43 | 25 26 21 | 27 55 59 |
| 3 | 15 17 48 | 17 52 26 | 20 27 4 | 22 56 42 | 25 31 20 | 28 0 58 |
| 4 | 15 22 47 | 17 57 25 | 20 32 3 | 23 1 41 | 25 36 19 | 28 5 58 |
| 5 | 15 27 47 | 18 2 24 | 20 37 2 | 23 6 41 | 25 41 19 | 28 10 57 |
| 6 | 15 32 46 | 18 7 24 | 20 42 2 | 23 11 40 | 25 46 18 | 28 15 56 |
| 7 | 15 37 45 | 18 12 23 | 20 47 1 | 23 16 39 | 25 51 17 | 28 20 56 |
| 8 | 15 42 45 | 18 17 22 | 20 52 0 | 23 21 39 | 25 56 16 | 28 25 55 |
| 9 | 15 47 44 | 18 22 22 | 20 56 59 | 23 26 38 | 26 1 16 | 28 30 54 |
| 10 | 15 52 43 | 18 27 21 | 21 1 59 | 23 31 37 | 26 6 15 | 28 35 53 |
| 11 | 15 57 42 | 18 32 20 | 21 6 58 | 23 36 36 | 26 11 14 | 28 40 53 |
| 12 | 16 2 42 | 18 37 19 | 21 11 57 | 23 41 36 | 26 16 14 | 28 45 52 |
| 13 | 16 7 41 | 18 42 19 | 21 16 57 | 23 46 35 | 26 21 13 | 28 50 51 |
| 14 | 16 12 40 | 18 47 18 | 21 21 56 | 23 51 34 | 26 26 12 | 28 55 51 |
| 15 | 16 17 40 | 18 52 17 | 21 26 55 | 23 56 34 | 26 31 11 | 29 0 50 |
| 16 | 16 22 39 | 18 57 17 | 21 31 54 | 24 1 33 | 26 36 11 | 29 5 49 |
| 17 | 16 27 38 | 19 2 16 | 21 36 54 | 24 6 32 | 26 41 10 | 29 10 48 |
| 18 | 16 32 37 | 19 7 15 | 21 41 53 | 24 11 31 | 26 46 9 | 29 15 48 |
| 19 | 16 37 37 | 19 12 14 | 21 46 52 | 24 16 31 | 26 51 9 | 29 20 47 |
| 20 | 16 42 36 | 19 17 14 | 21 51 52 | 24 21 30 | 26 56 8 | 29 25 46 |
| 21 | 16 47 35 | 19 22 13 | 21 56 51 | 24 26 29 | 27 1 7 | 29 30 46 |
| 22 | 16 52 35 | 19 27 12 | 22 1 50 | 24 31 29 | 27 6 6 | 29 35 45 |
| 23 | 16 57 34 | 19 32 12 | 22 6 49 | 24 36 28 | 27 11 6 | 29 40 44 |
| 24 | 17 2 33 | 19 37 11 | 22 11 49 | 24 41 27 | 27 16 5 | 29 45 43 |
| 25 | 17 7 32 | 19 42 10 | 22 16 48 | 24 46 26 | 27 21 4 | 29 50 43 |
| 26 | 17 12 32 | 19 47 9 | 22 21 47 | 24 51 26 | 27 26 3 | 29 55 42 |
| 27 | 17 17 31 | 19 52 9 | 22 26 46 | 24 56 25 | 27 31 3 | 30 0 41 |
| 28 | 17 22 30 | 19 57 8 | 22 31 46 | 25 1 24 | 27 36 2 | 30 5 41 |
| 29 | 17 27 29 | 20 2 7 | 22 36 45 | 25 6 24 | 27 41 1 | 30 10 40 |
| 30 | 17 32 29 | 20 7 7 | 22 41 44 | 25 11 23 | 27 46 1 | 30 15 39 |
| 31 | 17 37 28 | 20 12 6 | ′ ″ | 25 16 22 | ′ ″ | 30 20 38 |
| *Mot. Aphel.* | 0 42 | 0 48 | 0 54 | 1 0 | 1 6 | 1 12 |
| *Mot. Nodi* | 0 29 | 0 33 | 0 37 | 0 42 | 0 46 | 0 50 |

## IN ANNORVM CENTVRIIS.

| Annis Julian. Collect. | Medius Motus Jovis. S | ° | ′ | ″ | Æquat. Secularis. ° | ′ | Motus Aphelii Jovis. S | ° | ′ | Motus Nodi Jovis. ° | ′ | ″ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 5 | 6 | 28 | 11 | 0 | 0,6 | 0 | 2 | 0 | 1 | 23 | 20 |
| 200 | 10 | 12 | 56 | 22 | 0 | 2,3 | 0 | 4 | 0 | 2 | 46 | 40 |
| 300 | 3 | 19 | 24 | 33 | 0 | 5,2 | 0 | 6 | 0 | 4 | 10 | 0 |
| 400 | 8 | 25 | 52 | 44 | 0 | 9,2 | 0 | 8 | 0 | 5 | 33 | 20 |
| 500 | 2 | 2 | 20 | 55 | 0 | 14,3 | 0 | 10 | 0 | 6 | 56 | 40 |
| 600 | 7 | 8 | 49 | 6 | 0 | 20,6 | 0 | 12 | 0 | 8 | 20 | 0 |
| 700 | 0 | 15 | 17 | 17 | 0 | 28,1 | 0 | 14 | 0 | 9 | 43 | 20 |
| 800 | 5 | 21 | 45 | 28 | 0 | 36,7 | 0 | 16 | 0 | 11 | 6 | 40 |
| 900 | 10 | 28 | 13 | 39 | 0 | 46,4 | 0 | 18 | 0 | 12 | 30 | 0 |
| 1000 | 4 | 4 | 41 | 50 | 0 | 57,3 | 0 | 20 | 0 | 13 | 53 | 20 |
| 1100 | 9 | 11 | 10 | 1 | 1 | 9,4 | 0 | 22 | 0 | 15 | 16 | 40 |
| 1200 | 2 | 17 | 38 | 12 | 1 | 22,6 | 0 | 24 | 0 | 16 | 40 | 0 |
| 1300 | 7 | 24 | 6 | 23 | 1 | 36,9 | 0 | 26 | 0 | 18 | 3 | 20 |
| 1400 | 1 | 0 | 34 | 34 | 1 | 52,4 | 0 | 28 | 0 | 19 | 26 | 40 |
| 1500 | 6 | 7 | 2 | 45 | 2 | 9,0 | 1 | 0 | 0 | 20 | 50 | 0 |
| 1600 | 11 | 13 | 30 | 56 | 2 | 26,8 | 1 | 2 | 0 | 22 | 13 | 20 |
| 1700 | 4 | 19 | 59 | 7 | 2 | 45,7 | 1 | 4 | 0 | 23 | 36 | 40 |
| 1800 | 9 | 26 | 27 | 18 | 3 | 5,8 | 1 | 6 | 0 | 25 | 0 | 0 |
| 1900 | 3 | 2 | 55 | 29 | 3 | 27,0 | 1 | 8 | 0 | 26 | 23 | 20 |
| 2000 | 8 | 9 | 23 | 40 | 3 | 49,4 | 1 | 10 | 0 | 27 | 46 | 40 |
| 2100 | 1 | 15 | 51 | 51 | 4 | 12,9 | 1 | 12 | 0 | 29 | 10 | 0 |
| 2200 | 6 | 22 | 20 | 2 | 4 | 37,5 | 1 | 14 | 0 | 30 | 33 | 20 |
| 2300 | 11 | 28 | 48 | 13 | 5 | 3,3 | 1 | 16 | 0 | 31 | 56 | 40 |
| 2400 | 5 | 5 | 16 | 24 | 5 | 30,3 | 1 | 18 | 0 | 33 | 20 | 0 |
| 2500 | 10 | 11 | 44 | 35 | 5 | 58,4 | 1 | 20 | 0 | 34 | 43 | 20 |
| 2600 | 3 | 18 | 12 | 46 | 6 | 27,7 | 1 | 22 | 0 | 36 | 6 | 40 |
| 2700 | 8 | 24 | 40 | 57 | 6 | 58,0 | 1 | 24 | 0 | 37 | 30 | 0 |
| 2800 | 2 | 1 | 9 | 8 | 7 | 29,6 | 1 | 26 | 0 | 38 | 53 | 20 |
| 2900 | 7 | 7 | 37 | 19 | 8 | 2,0 | 1 | 28 | 0 | 40 | 16 | 40 |
| 3000 | 0 | 14 | 5 | 30 | 8 | 36,1 | 2 | 0 | 0 | 41 | 40 | 0 |

## IN HORIS ET MIN.

| Medius Motus Jovis. ′ H | ″ ′ | ‴ ″ | ′ H | ″ ′ | ‴ ″ |
|---|---|---|---|---|---|
| 1 | 0 | 12 | 31 | 6 | 26 |
| 2 | 0 | 25 | 32 | 6 | 39 |
| 3 | 0 | 37 | 33 | 6 | 51 |
| 4 | 0 | 50 | 34 | 7 | 4 |
| 5 | 1 | 2 | 35 | 7 | 16 |
| 6 | 1 | 15 | 36 | 7 | 29 |
| 7 | 1 | 27 | 37 | 7 | 42 |
| 8 | 1 | 40 | 38 | 7 | 54 |
| 9 | 1 | 52 | 39 | 8 | 6 |
| 10 | 2 | 5 | 40 | 8 | 19 |
| 11 | 2 | 17 | 41 | 8 | 31 |
| 12 | 2 | 30 | 42 | 8 | 43 |
| 13 | 2 | 42 | 43 | 8 | 56 |
| 14 | 2 | 54 | 44 | 9 | 8 |
| 15 | 3 | 7 | 45 | 9 | 21 |
| 16 | 3 | 19 | 46 | 9 | 33 |
| 17 | 3 | 32 | 47 | 9 | 46 |
| 18 | 3 | 44 | 48 | 9 | 58 |
| 19 | 3 | 57 | 49 | 10 | 11 |
| 20 | 4 | 9 | 50 | 10 | 23 |
| 21 | 4 | 22 | 51 | 10 | 36 |
| 22 | 4 | 34 | 52 | 10 | 48 |
| 23 | 4 | 47 | 53 | 11 | 1 |
| 24 | 4 | 59 | 54 | 11 | 13 |
| 25 | 5 | 12 | 55 | 11 | 26 |
| 26 | 5 | 24 | 56 | 11 | 38 |
| 27 | 5 | 37 | 57 | 11 | 50 |
| 28 | 5 | 49 | 58 | 12 | 3 |
| 29 | 6 | 1 | 59 | 12 | 15 |
| 30 | 6 | 14 | 60 | 12 | 28 |

*Æquatio Secularis addenda est medio Jovis Motui, tam in Seculis præteritis quam futuris.*

# TABULA ÆQUATIONUM JOVIS.

## Anomalia media Jovis.

| Gr. | Sig. 0. Subtr. ° ′ ″ | Diff. ′ ″ | Sig. I. Subtr. ° ′ ″ | Diff. ′ ″ | Sig. II. Subtr. ° ′ ″ | Diff. ′ ″ | |
|---|---|---|---|---|---|---|---|
| 0 | 0 0 0 | | 2 37 29 | | 4 38 22 | | 30 |
| | | 5 28 | | 4 48 | | 3 1 | |
| 1 | 0 5 28 | | 2 42 17 | | 4 41 23 | | 29 |
| | | 5 27 | | 4 46 | | 2 56 | |
| 2 | 0 10 55 | | 2 47 3 | | 4 44 19 | | 28 |
| | | 5 27 | | 4 44 | | 2 51 | |
| 3 | 0 16 22 | | 2 51 47 | | 4 47 10 | | 27 |
| | | 5 27 | | 4 41 | | 2 47 | |
| 4 | 0 21 49 | | 2 56 28 | | 4 49 57 | | 26 |
| | | 5 27 | | 4 38 | | 2 42 | |
| 5 | 0 27 16 | | 3 1 6 | | 4 52 39 | | 25 |
| | | 5 26 | | 4 35 | | 2 36 | |
| 6 | 0 32 42 | | 3 5 41 | | 4 55 15 | | 24 |
| | | 5 26 | | 4 32 | | 2 31 | |
| 7 | 0 38 8 | | 3 10 13 | | 4 57 46 | | 23 |
| | | 5 25 | | 4 29 | | 2 26 | |
| 8 | 0 43 33 | | 3 14 42 | | 5 0 12 | | 22 |
| | | 5 24 | | 4 27 | | 2 21 | |
| 9 | 0 48 57 | | 3 19 9 | | 5 2 33 | | 21 |
| | | 5 24 | | 4 24 | | 2 17 | |
| 10 | 0 54 21 | | 3 23 33 | | 5 4 50 | | 20 |
| | | 5 23 | | 4 21 | | 2 11 | |
| 11 | 0 59 44 | | 3 27 54 | | 5 7 1 | | 19 |
| | | 5 21 | | 4 17 | | 2 6 | |
| 12 | 1 5 5 | | 3 32 11 | | 5 9 7 | | 18 |
| | | 5 21 | | 4 13 | | 2 0 | |
| 13 | 1 10 26 | | 3 36 24 | | 5 11 7 | | 17 |
| | | 5 20 | | 4 10 | | 1 55 | |
| 14 | 1 15 46 | | 3 40 34 | | 5 13 2 | | 16 |
| | | 5 18 | | 4 6 | | 1 50 | |
| 15 | 1 21 4 | | 3 44 40 | | 5 14 52 | | 15 |
| | | 5 17 | | 4 3 | | 1 44 | |
| 16 | 1 26 21 | | 3 48 43 | | 5 16 36 | | 14 |
| | | 5 16 | | 3 59 | | 1 39 | |
| 17 | 1 31 37 | | 3 52 42 | | 5 18 15 | | 13 |
| | | 5 15 | | 3 55 | | 1 33 | |
| 18 | 1 36 52 | | 3 56 37 | | 5 19 48 | | 12 |
| | | 5 13 | | 3 51 | | 1 27 | |
| 19 | 1 42 5 | | 4 0 28 | | 5 21 15 | | 11 |
| | | 5 12 | | 3 48 | | 1 22 | |
| 20 | 1 47 17 | | 4 4 16 | | 5 22 37 | | 10 |
| | | 5 10 | | 3 44 | | 1 17 | |
| 21 | 1 52 27 | | 4 8 0 | | 5 23 54 | | 9 |
| | | 5 8 | | 3 40 | | 1 11 | |
| 22 | 1 57 35 | | 4 11 40 | | 5 25 5 | | 8 |
| | | 5 6 | | 3 35 | | 1 5 | |
| 23 | 2 2 41 | | 4 15 15 | | 5 26 10 | | 7 |
| | | 5 4 | | 3 31 | | 1 0 | |
| 24 | 2 7 45 | | 4 18 46 | | 5 27 10 | | 6 |
| | | 5 2 | | 3 27 | | 0 54 | |
| 25 | 2 12 47 | | 4 22 13 | | 5 28 4 | | 5 |
| | | 5 1 | | 3 23 | | 0 47 | |
| 26 | 2 17 48 | | 4 25 36 | | 5 28 51 | | 4 |
| | | 4 59 | | 3 18 | | 0 41 | |
| 27 | 2 22 47 | | 4 28 54 | | 5 29 32 | | 3 |
| | | 4 57 | | 3 14 | | 0 35 | |
| 28 | 2 27 44 | | 4 32 8 | | 5 30 7 | | 2 |
| | | 4 54 | | 3 9 | | 0 29 | |
| 29 | 2 32 38 | | 4 35 17 | | 5 30 36 | | 1 |
| | | 4 51 | | 3 5 | | 0 24 | |
| 30 | 2 37 29 | | 4 38 22 | | 5 31 0 | | 0 |
| | Sig. XI. Adde. | Diff. | Sig. X. Adde. | Diff. | Sig. IX. Adde. | Diff. | Gr. |

# TABULA ÆQUATIONUM JOVIS.

## Anomalia media Jovis.

| Gr. | Sig. III. Subtr. | Diff. | Sig. IV. Subtr. | Diff. | Sig. V. Subtr. | Diff. | |
|---|---|---|---|---|---|---|---|
| | ° ′ ″ | ′ ″ | ° ′ ″ | ′ ″ | ° ′ ″ | ′ ″ | |
| 0 | 5 31 0 | | 4 55 40 | | 2 54 48 | | 30 |
| | | 0 18 | | 2 45 | | 5 12 | |
| 1 | 5 31 18 | | 4 52 55 | | 2 49 36 | | 29 |
| | | 0 12 | | 2 51 | | 5 16 | |
| 2 | 5 31 30 | | 4 50 4 | | 2 44 20 | | 28 |
| | | 0 6 | | 2 56 | | 5 20 | |
| 3 | 5 31 36 | | 4 47 8 | | 2 39 0 | | 27 |
| | | 0 0 | | 3 2 | | 5 24 | |
| 4 | 5 31 36 | | 4 44 6 | | 2 33 36 | | 26 |
| | | 0 6 | | 3 7 | | 5 27 | |
| 5 | 5 31 30 | | 4 40 59 | | 2 28 9 | | 25 |
| | | 0 12 | | 3 13 | | 5 30 | |
| 6 | 5 31 18 | | 4 37 46 | | 2 22 39 | | 24 |
| | | 0 18 | | 3 19 | | 5 33 | |
| 7 | 5 31 0 | | 4 34 27 | | 2 17 6 | | 23 |
| | | 0 25 | | 3 25 | | 5 36 | |
| 8 | 5 30 35 | | 4 31 2 | | 2 11 30 | | 22 |
| | | 0 31 | | 3 30 | | 5 39 | |
| 9 | 5 30 4 | | 4 27 32 | | 2 5 51 | | 21 |
| | | 0 37 | | 3 36 | | 5 42 | |
| 10 | 5 29 27 | | 4 23 56 | | 2 0 9 | | 20 |
| | | 0 43 | | 3 41 | | 5 43 | |
| 11 | 5 28 44 | | 4 20 15 | | 1 54 26 | | 19 |
| | | 0 49 | | 3 46 | | 5 46 | |
| 12 | 5 27 55 | | 4 16 29 | | 1 48 40 | | 18 |
| | | 0 55 | | 3 52 | | 5 49 | |
| 13 | 5 27 0 | | 4 12 37 | | 1 42 51 | | 17 |
| | | 1 2 | | 3 57 | | 5 51 | |
| 14 | 5 25 58 | | 4 8 40 | | 1 37 0 | | 16 |
| | | 1 8 | | 4 2 | | 5 54 | |
| 15 | 5 24 50 | | 4 4 38 | | 1 31 6 | | 15 |
| | | 1 14 | | 4 6 | | 5 56 | |
| 16 | 5 23 36 | | 4 0 32 | | 1 25 10 | | 14 |
| | | 1 20 | | 4 11 | | 5 58 | |
| 17 | 5 22 16 | | 3 56 21 | | 1 19 12 | | 13 |
| | | 1 26 | | 4 17 | | 5 59 | |
| 18 | 5 20 50 | | 3 52 4 | | 1 13 13 | | 12 |
| | | 1 32 | | 4 22 | | 6 0 | |
| 19 | 5 19 17 | | 3 47 42 | | 1 7 13 | | 11 |
| | | 1 38 | | 4 27 | | 6 2 | |
| 20 | 5 17 39 | | 3 43 15 | | 1 1 11 | | 10 |
| | | 1 44 | | 4 31 | | 6 3 | |
| 21 | 5 15 55 | | 3 38 44 | | 0 55 8 | | 9 |
| | | 1 50 | | 4 35 | | 6 5 | |
| 22 | 5 14 5 | | 3 34 9 | | 0 49 3 | | 8 |
| | | 1 57 | | 4 40 | | 6 5 | |
| 23 | 5 12 8 | | 3 29 29 | | 0 42 58 | | 7 |
| | | 2 4 | | 4 45 | | 6 6 | |
| 24 | 5 10 4 | | 3 24 44 | | 0 36 52 | | 6 |
| | | 2 10 | | 4 49 | | 6 7 | |
| 25 | 5 7 54 | | 3 19 55 | | 0 30 45 | | 5 |
| | | 2 15 | | 4 53 | | 6 8 | |
| 26 | 5 5 39 | | 3 15 2 | | 0 24 37 | | 4 |
| | | 2 21 | | 4 57 | | 6 9 | |
| 27 | 5 3 18 | | 3 10 5 | | 0 18 28 | | 3 |
| | | 2 26 | | 5 2 | | 6 9 | |
| 28 | 5 0 52 | | 3 5 3 | | 0 12 19 | | 2 |
| | | 2 33 | | 5 6 | | 6 9 | |
| 29 | 4 58 19 | | 2 59 57 | | 0 6 10 | | 1 |
| | | 2 39 | | 5 9 | | 6 10 | |
| 30 | 4 55 40 | | 2 54 48 | | 0 0 0 | | 0 |
| Gr. | Sig. VIII. Adde. | Diff. | Sig. VII. Adde. | Diff. | Sig. VI. Adde. | Diff. | Gr. |

## LOGARITHMI DISTANTIARUM JOVIS A SOLE.

*Anomalia media Jovis.*

| Gr. | Sig. o. | Sig. I. | Sig. II. | Sig. III. | Sig. IV. | Sig. V. | |
|---|---|---|---|---|---|---|---|
| | *Logarith.* | *Logarith.* | *Logarith.* | *Logarith.* | *Logarith.* | *Logarith.* | |
| 0 | 5 736537 | 5 734080 | 5 727144 | 5 717093 | 5 706290 | 5 697840 | 30 |
| 1 | 5 736534 | 5 733916 | 5 726848 | 5 716729 | 5 705952 | 5 697636 | 29 |
| 2 | 5 736526 | 5 733747 | 5 726549 | 5 716364 | 5 705616 | 5 697438 | 28 |
| 3 | 5 736512 | 5 733573 | 5 726247 | 5 715999 | 5 705284 | 5 697246 | 27 |
| 4 | 5 736493 | 5 733394 | 5 725942 | 5 715633 | 5 704955 | 5 697060 | 26 |
| 5 | 5 736468 | 5 733210 | 5 725633 | 5 715266 | 5 704630 | 5 696880 | 25 |
| 6 | 5 736437 | 5 733021 | 5 725321 | 5 714899 | 5 704307 | 5 696707 | 24 |
| 7 | 5 736401 | 5 732827 | 5 725006 | 5 714532 | 5 703988 | 5 696540 | 23 |
| 8 | 5 736360 | 5 732629 | 5 724688 | 5 714165 | 5 703672 | 5 696380 | 22 |
| 9 | 5 736313 | 5 732426 | 5 724367 | 5 713798 | 5 703360 | 5 696227 | 21 |
| 10 | 5 736260 | 5 732218 | 5 724043 | 5 713431 | 5 703052 | 5 696080 | 20 |
| 11 | 5 736202 | 5 732006 | 5 723716 | 5 713064 | 5 702748 | 5 695940 | 19 |
| 12 | 5 736139 | 5 731789 | 5 723386 | 5 712697 | 5 702447 | 5 695807 | 18 |
| 13 | 5 736070 | 5 731567 | 5 723053 | 5 712331 | 5 702150 | 5 695680 | 17 |
| 14 | 5 735996 | 5 731341 | 5 722718 | 5 711965 | 5 701857 | 5 695560 | 16 |
| 15 | 5 735916 | 5 731110 | 5 722382 | 5 711600 | 5 701569 | 5 695447 | 15 |
| 16 | 5 735831 | 5 730875 | 5 722043 | 5 711236 | 5 701286 | 5 695342 | 14 |
| 17 | 5 735740 | 5 730635 | 5 721701 | 5 710873 | 5 701007 | 5 695244 | 13 |
| 18 | 5 735644 | 5 730391 | 5 721357 | 5 710511 | 5 700732 | 5 695152 | 12 |
| 19 | 5 735542 | 5 730143 | 5 721011 | 5 710150 | 5 700462 | 5 695067 | 11 |
| 20 | 5 735435 | 5 729890 | 5 720663 | 5 709791 | 5 700197 | 5 694990 | 10 |
| 21 | 5 735324 | 5 729633 | 5 720313 | 5 709433 | 5 699938 | 5 694920 | 9 |
| 22 | 5 735207 | 5 729372 | 5 719961 | 5 709076 | 5 699683 | 5 694858 | 8 |
| 23 | 5 735084 | 5 729107 | 5 719607 | 5 708720 | 5 699433 | 5 694803 | 7 |
| 24 | 5 734956 | 5 728838 | 5 719252 | 5 708366 | 5 699189 | 5 694755 | 6 |
| 25 | 5 734823 | 5 728565 | 5 718895 | 5 708014 | 5 698950 | 5 694713 | 5 |
| 26 | 5 734685 | 5 728288 | 5 718536 | 5 707665 | 5 698716 | 5 694680 | 4 |
| 27 | 5 734541 | 5 728008 | 5 718177 | 5 707318 | 5 698488 | 5 694655 | 3 |
| 28 | 5 734392 | 5 727724 | 5 717816 | 5 706973 | 5 698266 | 5 694637 | 2 |
| 29 | 5 734238 | 5 727436 | 5 717455 | 5 706630 | 5 698050 | 5 694626 | 1 |
| 30 | 5 734080 | 5 727144 | 5 717093 | 5 706290 | 5 697840 | 5 694622 | 0 |
| | Sig. XI. | Sig. X. | Sig. IX. | Sig. VIII. | Sig. VII. | Sig. VI. | *Gr.* |

# TABULA LATITUDINARIA JOVIS.

| Argument. Latitudinis. Gr. | Sig. 0. Bor. Sig. 6. Aust. Inclinatio ° ′ ″ | Subtr. Subtr. Reduct. ′ ″ | Curtatio Log. | Sig. 1. Bor. Sig. 7. Aust. Inclinatio ° ′ ″ | Subtr. Subtr. Reduct. ′ ″ | Curtatio Log. | Sig. 2. Bor. Sig. 8. Aust Inclinatio ° ′ ″ | Subtr. Subtr. Reduct. ′ ″ | Curtatio Log. | Gr. |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 0 0 | 0 0 | 0 | 0 39 35 | 0 24 | 29 | 1 8 34 | 0 24 | 86 | 30 |
| 1 | 0 1 23 | 0 1 | 0 | 0 40 46 | 0 24 | 30 | 1 9 14 | 0 23 | 88 | 29 |
| 2 | 0 2 46 | 0 2 | 0 | 0 41 57 | 0 25 | 32 | 1 9 54 | 0 23 | 90 | 28 |
| 3 | 0 4 9 | 0 3 | 0 | 0 43 7 | 0 25 | 34 | 1 10 32 | 0 22 | 91 | 27 |
| 4 | 0 5 31 | 0 4 | 0 | 0 44 16 | 0 25 | 36 | 1 11 9 | 0 22 | 93 | 26 |
| 5 | 0 6 54 | 0 5 | 1 | 0 45 24 | 0 26 | 38 | 1 11 45 | 0 21 | 94 | 25 |
| 6 | 0 8 16 | 0 6 | 1 | 0 46 32 | 0 26 | 40 | 1 12 19 | 0 20 | 96 | 24 |
| 7 | 0 9 39 | 0 7 | 2 | 0 47 39 | 0 26 | 42 | 1 12 52 | 0 20 | 97 | 23 |
| 8 | 0 11 1 | 0 8 | 2 | 0 48 44 | 0 26 | 44 | 1 13 24 | 0 19 | 99 | 22 |
| 9 | 0 12 23 | 0 8 | 3 | 0 49 49 | 0 27 | 46 | 1 13 54 | 0 18 | 100 | 21 |
| 10 | 0 13 45 | 0 9 | 3 | 0 50 53 | 0 27 | 48 | 1 14 23 | 0 18 | 102 | 20 |
| 11 | 0 15 6 | 0 10 | 4 | 0 51 56 | 0 27 | 50 | 1 14 51 | 0 17 | 103 | 19 |
| 12 | 0 16 27 | 0 11 | 5 | 0 52 58 | 0 27 | 52 | 1 15 17 | 0 16 | 104 | 18 |
| 13 | 0 17 48 | 0 12 | 6 | 0 53 59 | 0 27 | 53 | 1 15 42 | 0 15 | 105 | 17 |
| 14 | 0 19 9 | 0 13 | 7 | 0 55 0 | 0 27 | 55 | 1 16 6 | 0 14 | 106 | 16 |
| 15 | 0 20 29 | 0 14 | 8 | 0 55 59 | 0 27 | 57 | 1 16 28 | 0 14 | 107 | 15 |
| 16 | 0 21 49 | 0 14 | 9 | 0 56 57 | 0 27 | 59 | 1 16 49 | 0 13 | 108 | 14 |
| 17 | 0 23 9 | 0 15 | 10 | 0 57 54 | 0 27 | 61 | 1 17 8 | 0 12 | 109 | 13 |
| 18 | 0 24 28 | 0 16 | 11 | 0 58 50 | 0 27 | 64 | 1 17 26 | 0 11 | 110 | 12 |
| 19 | 0 25 46 | 0 17 | 12 | 0 59 45 | 0 27 | 66 | 1 17 43 | 0 10 | 111 | 11 |
| 20 | 0 27 5 | 0 18 | 13 | 1 0 39 | 0 27 | 68 | 1 17 58 | 0 9 | 112 | 10 |
| 21 | 0 28 22 | 0 18 | 15 | 1 1 31 | 0 27 | 69 | 1 18 11 | 0 8 | 112 | 9 |
| 22 | 0 29 39 | 0 19 | 16 | 1 2 23 | 0 26 | 71 | 1 18 24 | 0 8 | 113 | 8 |
| 23 | 0 30 56 | 0 20 | 18 | 1 3 13 | 0 26 | 73 | 1 18 35 | 0 7 | 113 | 7 |
| 24 | 0 32 12 | 0 20 | 19 | 1 4 3 | 0 26 | 75 | 1 18 44 | 0 6 | 114 | 6 |
| 25 | 0 33 27 | 0 21 | 20 | 1 4 51 | 0 26 | 77 | 1 18 52 | 0 5 | 114 | 5 |
| 26 | 0 34 42 | 0 22 | 22 | 1 5 38 | 0 25 | 79 | 1 18 58 | 0 4 | 114 | 4 |
| 27 | 0 35 56 | 0 22 | 24 | 1 6 24 | 0 25 | 81 | 1 19 3 | 0 3 | 115 | 3 |
| 28 | 0 37 10 | 0 23 | 25 | 1 7 8 | 0 25 | 83 | 1 19 7 | 0 2 | 115 | 2 |
| 29 | 0 38 23 | 0 23 | 27 | 1 7 52 | 0 24 | 85 | 1 19 9 | 0 1 | 115 | 1 |
| 30 | 0 39 35 | 0 24 | 29 | 1 8 34 | 0 24 | 86 | 1 19 10 | 0 0 | 115 | 0 |
| | Sig. 11. Aust. Sig. 5. Bor. | Adde. Adde. | | Sig. 10. Aust. Sig. 4. Bor. | Adde. Adde. | | Sig. 9 Aust. Sig. 3. Bor. | Adde. Adde. | | Gr |

## SERIES OPPOSITIONVM SOLIS ET JOVIS NOSTRA ÆTATE FACTARVM CVM COMPVTO PRÆCEDENTE COLLATA.

| *Oppositionum Tempora æquata* Londini. | | | | *Locus Solis verus.* | | | *Anom. med. Jovis.* | | | | *Jupiter Heliocentricus comp.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | D. | H. | ′ | ° | ′ | ″ | S | ° | ′ | ″ | ° | ′ | ″ | ′ | ″ |
| 1657 | *Dec.* | 16 | 11 | 2 | ♒ | 5 | 47 | 3 | 8 | 21 | 31 | 2 | ♋ | 5 | 44 | 56 | −2 | 7 |
| 1659 | *Jan.* | 17 | 11 | 38 | ♒ | 8 | 8 | 32 | 9 | 24 | 30 | 7 | ♌ | 8 | 8 | 23 | −0 | 9 |
| 1660 | *Feb.* | 17 | 6 | 48 | ♓ | 8 | 58 | 2 | 10 | 27 | 23 | 12 | ♍ | 8 | 58 | 44 | +0 | 42 |
| 1661 | *Mart.* | 18 | 17 | 49 | ♈ | 8 | 59 | 14 | 0 | 0 | 14 | 28 | ♎ | 9 | 0 | 27 | +1 | 13 |
| 1662 | *Apr.* | 18 | 19 | 22 | ♉ | 9 | 4 | 57 | 1 | 3 | 8 | 52 | ♏ | 9 | 5 | 22 | +0 | 25 |
| 1663 | *Maii* | 21 | 7 | 6 | ♊ | 10 | 5 | 55 | 2 | 6 | 10 | 9 | ♐ | 10 | 4 | 47 | −1 | 8 |
| 1664 | *Jun.* | 23 | 19 | 3 | ♋ | 12 | 46 | 49 | 3 | 9 | 21 | 33 | ♑ | 12 | 42 | 44 | −4 | 5 |
| 1665 | *Jul.* | 30 | 7 | 4 | ♌ | 17 | 26 | 46 | 4 | 12 | 42 | 58 | ♒ | 17 | 21 | 18 | −5 | 28 |
| 1666 | *Sept.* | 5 | 23 | 21 | ♍ | 23 | 43 | 18 | 5 | 16 | 10 | 14 | ♓ | 23 | 39 | 46 | −3 | 32 |
| 1667 | *Oct.* | 13 | 10 | 4 | ♎ | 0 | 30 | 49 | 6 | 19 | 36 | 17 | ♉ | 0 | 29 | 37 | −1 | 12 |
| 1668 | *Nov.* | 17 | 6 | 46 | ♐ | 6 | 24 | 48 | 7 | 23 | 4 | 12 | ♊ | 6 | 26 | 0 | +1 | 12 |
| 1669 | *Dec.* | 20 | 23 | 15 | ♑ | 10 | 28 | 5 | 8 | 26 | 1 | 50 | ♋ | 10 | 31 | 8 | +3 | 3 |
| 1671 | *Jan.* | 21 | 19 | 9 | ♒ | 12 | 36 | 11 | 9 | 29 | 0 | 0 | ♌ | 12 | 39 | 56 | +3 | 45 |
| 1672 | *Feb.* | 21 | 12 | 31 | ♓ | 13 | 17 | 54 | 11 | 1 | 52 | 32 | ♍ | 13 | 20 | 54 | +3 | 0 |
| 1673 | *Mart.* | 23 | 0 | 49 | ♈ | 13 | 18 | 1 | 0 | 4 | 44 | 3 | ♎ | 13 | 19 | 59 | +1 | 58 |
| 1674 | *Apr.* | 23 | 6 | 20 | ♉ | 13 | 29 | 13 | 1 | 7 | 39 | 10 | ♏ | 13 | 29 | 25 | +0 | 12 |
| 1675 | *Maii* | 26 | 0 | 10 | ♊ | 14 | 41 | 55 | 2 | 10 | 41 | 47 | ♐ | 14 | 40 | 7 | −1 | 48 |
| 1676 | *Jun.* | 28 | 18 | 57 | ♋ | 17 | 38 | 15 | 3 | 13 | 54 | 40 | ♑ | 17 | 34 | 0 | −4 | 15 |
| 1677 | *Aug.* | 4 | 11 | 58 | ♌ | 22 | 32 | 40 | 4 | 17 | 17 | 4 | ♒ | 22 | 28 | 23 | −4 | 17 |
| 1678 | *Sept.* | 11 | 5 | 50 | ♍ | 28 | 58 | 35 | 5 | 20 | 44 | 40 | ♓ | 28 | 56 | 12 | −2 | 23 |
| 1679 | *Oct.* | 18 | 13 | 7 | ♎ | 5 | 44 | 0 | 6 | 24 | 10 | 5 | ♉ | 5 | 43 | 38 | −0 | 22 |
| 1680 | *Nov.* | 22 | 2 | 49 | ♐ | 11 | 24 | 45 | 7 | 27 | 26 | 51 | ♊ | 11 | 26 | 31 | +1 | 46 |
| 1681 | *Dec.* | 25 | 12 | 41 | ♑ | 15 | 14 | 20 | 9 | 0 | 32 | 45 | ♋ | 15 | 15 | 38 | +1 | 18 |
| 1683 | *Jan.* | 26 | 5 | 13 | ♒ | 17 | 10 | 0 | 10 | 3 | 30 | 7 | ♌ | 17 | 10 | 28 | +0 | 28 |
| 1684 | *Feb.* | 25 | 20 | 26 | ♓ | 17 | 42 | 38 | 11 | 6 | 22 | 21 | ♍ | 17 | 42 | 47 | +0 | 9 |
| 1685 | *Mart.* | 27 | 9 | 4 | ♈ | 17 | 39 | 15 | 0 | 9 | 13 | 50 | ♏ | 17 | 39 | 55 | +0 | 40 |
| 1686 | *Apr.* | 27 | 17 | 9 | ♉ | 17 | 52 | 40 | 1 | 12 | 9 | 31 | ♎ | 17 | 54 | 34 | +1 | 54 |
| 1687 | *Maii* | 30 | 15 | 11 | ♊ | 19 | 12 | 40 | 2 | 15 | 13 | 2 | ♐ | 19 | 16 | 48 | +4 | 8 |
| 1688 | *Julii* | 3 | 14 | 44 | ♋ | 22 | 20 | 0 | 3 | 18 | 26 | 52 | ♑ | 22 | 26 | 29 | +6 | 29 |
| 1689 | *Aug.* | 9 | 12 | 17 | ♌ | 27 | 28 | 10 | 4 | 21 | 50 | 15 | ♒ | 27 | 36 | 16 | +8 | 6 |

# SERIES OPPOSITIONVM SOLIS ET JOVIS NOSTRA ÆTATE FACTARVM CVM COMPVTO PRÆCEDENTE COLLATA.

| Oppositionum Tempora æquata Londini. | | | | | Locus Solis verus. | | | Anom. med. Jovis. | | | | Jupiter Heliocentricus comp. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | D. | H. | ′ | ° | ′ | ″ | S | ° | ′ | ″ | ° | ′ | ″ | ′ | ″ |
| 1690 | *Sept.* | 16 | 8 | 19 | ♎ 4 | 5 | 0 | 5 | 25 | 18 | 14 | ♈ 4 | 12 | 5 | +7 | 5 |
| 1691 | *Oct.* | 23 | 13 | 17 | ♏ 10 | 50 | 45 | 6 | 28 | 43 | 7 | ♉ 10 | 55 | 38 | +4 | 53 |
| 1692 | *Nov.* | 26 | 22 | 45 | ♐ 16 | 24 | 45 | 8 | 1 | 59 | 1 | ♊ 16 | 25 | 27 | +0 | 42 |
| 1693 | *Dec.* | 30 | 3 | 33 | ♑ 20 | 0 | 0 | 9 | 5 | 3 | 57 | ♋ 19 | 58 | 18 | −1 | 42 |
| 1695 | *Jan.* | 30 | 14 | 46 | ♒ 21 | 42 | 5 | 10 | 8 | 0 | 14 | ♌ 21 | 39 | 17 | −2 | 48 |
| 1696 | *Mart.* | 1 | 3 | 47 | ♓ 22 | 5 | 25 | 11 | 10 | 51 | 55 | ♍ 22 | 3 | 38 | −1 | 47 |
| 1697 | *Mart.* | 31 | 17 | 18 | ♈ 21 | 59 | 52 | 0 | 13 | 43 | 43 | ♎ 22 | 0 | 11 | +0 | 19 |
| 1698 | *Maii* | 2 | 5 | 26 | ♉ 22 | 19 | 8 | 1 | 16 | 40 | 16 | ♏ 22 | 21 | 6 | +1 | 58 |
| 1699 | *Jun.* | 4 | 9 | 33 | ♊ 23 | 51 | 10 | 2 | 19 | 45 | 0 | ♐ 23 | 55 | 57 | +4 | 47 |
| 1700 | *Jul.* | 8 | 16 | 0 | ♋ 27 | 15 | 0 | 3 | 23 | 0 | 14 | ♑ 27 | 22 | 11 | +7 | 14 |
| 1701 | *Aug.* | 14 | 20 | 2 | ♍ 2 | 42 | 15 | 4 | 26 | 24 | 55 | ♓ 2 | 47 | 23 | +5 | 8 |
| 1702 | *Sept.* | 21 | 17 | 1 | ♎ 9 | 27 | 35 | 5 | 29 | 53 | 10 | ♈ 9 | 29 | 35 | +2 | 0 |
| 1703 | *Oct.* | 28 | 17 | 20 | ♏ 16 | 8 | 0 | 7 | 3 | 17 | 6 | ♉ 16 | 6 | 36 | −1 | 24 |
| 1704 | *Dec.* | 1 | 18 | 46 | ♐ 21 | 25 | 0 | 8 | 6 | 31 | 18 | ♊ 21 | 22 | 26 | −2 | 34 |
| 1706 | *Jan.* | 3 | 16 | 6 | ♑ 24 | 41 | 37 | 9 | 9 | 34 | 41 | ♋ 24 | 38 | 37 | −3 | 0 |
| 1707 | *Feb.* | 3 | 21 | 55 | ♒ 26 | 7 | 40 | 10 | 12 | 29 | 52 | ♌ 26 | 6 | 21 | −1 | 19 |
| 1708 | *Mart.* | 5 | 9 | 10 | ♓ 26 | 22 | 48 | 11 | 15 | 21 | 9 | ♍ 26 | 23 | 47 | +0 | 59 |
| 1709 | *Apr.* | 5 | 0 | 50 | ♈ 26 | 18 | 10 | 0 | 18 | 13 | 20 | ♎ 26 | 20 | 37 | +2 | 27 |
| 1710 | *Maii* | 6 | 17 | 55 | ♉ 26 | 45 | 37 | 1 | 21 | 10 | 54 | ♏ 26 | 48 | 55 | +3 | 18 |
| 1711 | *Jun.* | 9 | 6 | 22 | ♊ 28 | 35 | 20 | 2 | 24 | 17 | 25 | ♐ 28 | 37 | 42 | +2 | 22 |
| 1712 | *Jul.* | 13 | 21 | 38 | ♌ 2 | 20 | 45 | 3 | 27 | 34 | 29 | ♒ 2 | 21 | 2 | +0 | 17 |
| 1713 | *Aug.* | 20 | 5 | 53 | ♍ 8 | 2 | 10 | 5 | 1 | 0 | 5 | ♓ 8 | 1 | 5 | −1 | 5 |
| 1714 | *Sept.* | 27 | 2 | 4 | ♎ 14 | 52 | 0 | 6 | 4 | 28 | 10 | ♈ 14 | 47 | 10 | −4 | 50 |
| 1715 | *Nov.* | 2 | 19 | 13 | ♏ 21 | 20 | 27 | 7 | 7 | 56 | 36 | ♉ 21 | 17 | 14 | −3 | 13 |
| 1716 | *Dec.* | 6 | 12 | 35 | ♐ 26 | 20 | 18 | 8 | 11 | 3 | 8 | ♊ 26 | 16 | 46 | −3 | 32 |
| 1718 | *Jan.* | 8 | 2 | 32 | ♑ 29 | 17 | 40 | 9 | 14 | 4 | 58 | ♋ 29 | 16 | 30 | −1 | 10 |
| 1719 | *Feb.* | 8 | 4 | 12 | ♓ 0 | 30 | 35 | 10 | 16 | 59 | 11 | ♍ 0 | 31 | 52 | +1 | 17 |
| 1720 | *Mart.* | 9 | 16 | 20 | ♈ 0 | 43 | 51 | 11 | 19 | 50 | 45 | ♎ 0 | 43 | 51 | + | |
| 1721 | *Apr.* | 9 | 10 | 52 | ♉ 0 | 41 | 59 | 0 | 22 | 43 | 36 | ♏ 0 | 41 | 59 | + | |
| 1722 | *Maii* | 11 | 9 | 19 | ♊ 1 | 18 | 41 | 1 | 25 | 42 | 13 | ♐ 1 | 18 | 41 | + | |

## EPOCHÆ MEDIORUM MOTUUM SATURNI.

| Annis Juli-anis ineun-tibus. | Saturnus ab Æquinoct. | | | | Aphel. ♄ ♐ 27° | | | Nod. ♄ ♋ 20° | | | Annis Juli anis ineun tibus. | Saturnus ab Æquinoct. | | | | Aphel. ♄ ♐ 28° | | | Nod. ♄ ♋ 21° | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S | o | ′ | ″ | o | ′ | ″ | o | ′ | ″ | | S | o | ′ | ″ | o | ′ | ″ | | ′ | ″ |
| 1661 | 7 | 12 | 15 | 29 | 41 | 20 | | 53 | 24 | | 1696 | 9 | 20 | 19 | 4 | 28 | 0 | | 3 | 54 | |
| 62 | 7 | 24 | 28 | 50 | 42 | 40 | | 53 | 42 | | 97 | 10 | 2 | 34 | 26 | 29 | 20 | | 4 | 12 | |
| 63 | 8 | 6 | 42 | 12 | 44 | 0 | | 54 | 0 | | 98 | 10 | 14 | 47 | 48 | 30 | 40 | | 4 | 30 | |
| 64 | 8 | 18 | 55 | 33 | 45 | 20 | | 54 | 18 | | 99 | 10 | 27 | 1 | 9 | 32 | 0 | | 4 | 48 | |
| 1665 | 9 | 1 | 10 | 55 | 46 | 40 | | 54 | 26 | | 1700 | 11 | 9 | 14 | 31 | 33 | 20 | | 5 | 6 | |
| 1666 | 9 | 13 | 24 | 17 | 48 | 0 | | 54 | 54 | | 1701 | 11 | 21 | 29 | 53 | 34 | 40 | | 5 | 24 | |
| 67 | 9 | 25 | 37 | 38 | 49 | 20 | | 55 | 12 | | 2 | 0 | 3 | 43 | 14 | 36 | 0 | | 5 | 42 | |
| 68 | 10 | 7 | 51 | 0 | 50 | 40 | | 55 | 30 | | 3 | 0 | 15 | 56 | 36 | 37 | 20 | | 6 | 0 | |
| 69 | 10 | 20 | 6 | 22 | 52 | 0 | | 55 | 48 | | 4 | 0 | 28 | 9 | 57 | 38 | 40 | | 6 | 18 | |
| 1670 | 11 | 2 | 19 | 43 | 53 | 20 | | 56 | 6 | | 1705 | 1 | 10 | 25 | 19 | 40 | 0 | | 6 | 36 | |
| 1671 | 11 | 14 | 33 | 5 | 54 | 40 | | 56 | 24 | | 1706 | 1 | 22 | 38 | 41 | 41 | 20 | | 6 | 54 | |
| 72 | 11 | 26 | 46 | 26 | 56 | 0 | | 56 | 42 | | 7 | 2 | 4 | 52 | 2 | 42 | 40 | | 7 | 12 | |
| 73 | 0 | 9 | 1 | 48 | 57 | 20 | | 57 | 0 | | 8 | 2 | 17 | 5 | 24 | 44 | 0 | | 7 | 30 | |
| 74 | 0 | 21 | 15 | 9 | 58 | 40 | | 57 | 18 | | 9 | 2 | 29 | 20 | 40 | 45 | 20 | | 7 | 48 | |
| 1675 | 1 | 3 | 28 | 31 | 28 ♐ | 0 | | 57 | 36 | | 1710 | 3 | 11 | 34 | 7 | 46 | 40 | | 8 | 6 | |
| 1676 | 1 | 15 | 41 | 52 | 1 | 20 | | 57 | 54 | | 1711 | 3 | 23 | 47 | 29 | 48 | 0 | | 8 | 24 | |
| 77 | 1 | 27 | 57 | 14 | 2 | 40 | | 58 | 12 | | 12 | 4 | 6 | 0 | 50 | 49 | 20 | | 8 | 42 | |
| 78 | 2 | 10 | 10 | 36 | 4 | 0 | | 58 | 30 | | 13 | 4 | 18 | 16 | 12 | 50 | 40 | | 9 | 0 | |
| 79 | 2 | 22 | 23 | 57 | 5 | 20 | | 58 | 48 | | 14 | 5 | 0 | 29 | 33 | 52 | 0 | | 9 | 18 | |
| 1680 | 3 | 4 | 37 | 19 | 6 | 40 | | 59 | 6 | | 1715 | 5 | 12 | 42 | 55 | 53 | 20 | | 9 | 36 | |
| 1681 | 3 | 16 | 52 | 41 | 8 | 0 | | 59 | 24 | | 1716 | 5 | 24 | 56 | 16 | 54 | 40 | | 9 | 54 | |
| 82 | 3 | 29 | 6 | 2 | 9 | 20 | | 59 | 42 | | 17 | 6 | 7 | 11 | 38 | 56 | 0 | | 10 | 12 | |
| 83 | 4 | 11 | 19 | 24 | 10 | 40 | | 21 | 0 | 0 | 18 | 6 | 19 | 25 | 0 | 57 | 20 | | 10 | 30 | |
| 84 | 4 | 23 | 32 | 45 | 12 | 0 | | ♋ | 0 | 18 | 19 | 7 | 1 | 38 | 21 | 58 | 40 | | 10 | 48 | |
| 1685 | 5 | 5 | 48 | 7 | 13 | 20 | | | 0 | 36 | 1720 | 7 | 13 | 51 | 43 | 29 ♐ | 0 | | 11 | 6 | |
| 1686 | 5 | 18 | 1 | 29 | 14 | 40 | | | 0 | 54 | 1721 | 7 | 26 | 7 | 5 | 1 | 20 | | 11 | 24 | |
| 87 | 6 | 0 | 14 | 50 | 16 | 0 | | | 1 | 12 | 22 | 8 | 8 | 20 | 26 | 2 | 40 | | 11 | 42 | |
| 88 | 6 | 12 | 28 | 12 | 17 | 20 | | | 1 | 30 | 23 | 8 | 20 | 33 | 48 | 4 | 0 | | 12 | 0 | |
| 89 | 6 | 24 | 43 | 34 | 18 | 40 | | | 1 | 48 | 24 | 9 | 2 | 47 | 9 | 5 | 20 | | 12 | 18 | |
| 1690 | 7 | 6 | 56 | 55 | 20 | 0 | | | 2 | 6 | 1725 | 9 | 15 | 2 | 31 | 6 | 40 | | 12 | 36 | |
| 1691 | 7 | 19 | 10 | 17 | 21 | 20 | | | 2 | 24 | 1726 | 9 | 27 | 15 | 53 | 8 | 0 | | 12 | 54 | |
| 92 | 8 | 1 | 23 | 38 | 22 | 40 | | | 2 | 42 | 27 | 10 | 9 | 29 | 14 | 9 | 20 | | 13 | 12 | |
| 93 | 8 | 13 | 39 | 0 | 24 | 0 | | | 3 | 0 | 28 | 10 | 21 | 42 | 36 | 10 | 40 | | 13 | 30 | |
| 94 | 8 | 25 | 52 | 21 | 25 | 20 | | | 3 | 18 | 29 | 11 | 3 | 57 | 58 | 12 | 0 | | 13 | 48 | |
| 1695 | 9 | 8 | 5 | 43 | 26 | 40 | | | 3 | 36 | 1730 | 11 | 16 | 11 | 19 | 13 | 20 | | 14 | 6 | |

## EPOCHÆ MEDIORVM MOTVVM SATVRNI.

| Annis Juli-anis ineun-tibus. | Saturnus ab Æquinoct. | | | | Aphel. ♄ ♐ 29° | | Nod. ♄ ♋ 21° | |
|---|---|---|---|---|---|---|---|---|
| | S | o | ′ | ″ | o | ′ | ′ | ″ |
| 1731 | 11 | 28 | 24 | 41 | 14 | 40 | 14 | 24 |
| 32 | 0 | 10 | 38 | 2 | 16 | 0 | 14 | 42 |
| 33 | 0 | 22 | 53 | 24 | 17 | 20 | 15 | 0 |
| 34 | 1 | 5 | 6 | 45 | 18 | 40 | 15 | 18 |
| 1735 | 1 | 17 | 20 | 7 | 20 | 0 | 15 | 36 |
| 1736 | 1 | 29 | 33 | 28 | 21 | 20 | 15 | 54 |
| 37 | 2 | 11 | 48 | 50 | 22 | 40 | 16 | 12 |
| 38 | 2 | 24 | 2 | 12 | 24 | 0 | 16 | 30 |
| 39 | 3 | 6 | 15 | 33 | 25 | 20 | 16 | 48 |
| 1740 | 3 | 18 | 28 | 55 | 26 | 40 | 17 | 6 |
| 1741 | 4 | 0 | 44 | 17 | 28 | 0 | 17 | 24 |
| 42 | 4 | 12 | 57 | 38 | 29 | 20 | 17 | 42 |
| 43 | 4 | 25 | 11 | 0 | 30 | 40 | 18 | 0 |
| 44 | 5 | 7 | 24 | 21 | 32 | 0 | 18 | 18 |
| 1745 | 5 | 19 | 39 | 43 | 33 | 20 | 18 | 36 |
| 1746 | 6 | 1 | 53 | 5 | 34 | 40 | 18 | 54 |
| 47 | 6 | 14 | 6 | 26 | 36 | 0 | 19 | 12 |
| 48 | 6 | 26 | 19 | 48 | 37 | 20 | 19 | 30 |
| 49 | 7 | 8 | 35 | 10 | 38 | 40 | 19 | 48 |
| 1750 | 7 | 20 | 48 | 31 | 40 | 0 | 20 | 6 |
| 1751 | 8 | 3 | 1 | 53 | 41 | 20 | 20 | 24 |
| 52 | 8 | 15 | 15 | 14 | 42 | 40 | 20 | 42 |
| 53 | 8 | 27 | 30 | 36 | 44 | 0 | 21 | 0 |
| 54 | 9 | 9 | 43 | 57 | 45 | 20 | 21 | 18 |
| 1755 | 9 | 21 | 57 | 19 | 46 | 40 | 21 | 36 |
| 1756 | 10 | 4 | 10 | 40 | 48 | 0 | 21 | 54 |
| 57 | 10 | 16 | 26 | 2 | 49 | 20 | 22 | 12 |
| 58 | 10 | 28 | 39 | 24 | 50 | 40 | 22 | 30 |
| 59 | 11 | 10 | 52 | 45 | 52 | 0 | 22 | 48 |
| 1760 | 11 | 23 | 6 | 7 | 53 | 20 | 23 | 6 |
| 1761 | 0 | 5 | 21 | 29 | 54 | 40 | 23 | 24 |
| 62 | 0 | 17 | 34 | 50 | 56 | 0 | 23 | 42 |
| 63 | 0 | 29 | 48 | 12 | 57 | 20 | 24 | 0 |
| 64 | 1 | 12 | 1 | 33 | 58 | 40 | 24 | 18 |
| 1765 | 1 | 24 | 16 | 55 | ♍ 0 | 0 | 24 | 36 |

| Annis Juli-anis ineun-tibus. | Saturnus ab Æquinoct. | | | | Aphel. ♄ ♍ 0° | | Nod. ♄ ♋ 21° | |
|---|---|---|---|---|---|---|---|---|
| | S | o | ′ | ″ | o | ′ | ′ | ″ |
| 1766 | 2 | 6 | 30 | 17 | 1 | 20 | 24 | 54 |
| 67 | 2 | 18 | 43 | 38 | 2 | 40 | 25 | 12 |
| 68 | 3 | 0 | 57 | 0 | 4 | 0 | 25 | 30 |
| 69 | 3 | 13 | 12 | 22 | 5 | 20 | 25 | 48 |
| 1770 | 3 | 25 | 25 | 43 | 6 | 40 | 26 | 6 |
| 1771 | 4 | 7 | 39 | 5 | 8 | 0 | 26 | 24 |
| 72 | 4 | 19 | 52 | 26 | 9 | 20 | 26 | 42 |
| 73 | 5 | 2 | 7 | 48 | 10 | 40 | 27 | 0 |
| 74 | 5 | 14 | 21 | 9 | 12 | 0 | 27 | 18 |
| 1775 | 5 | 26 | 34 | 31 | 13 | 20 | 27 | 36 |
| 1776 | 6 | 8 | 47 | 52 | 14 | 40 | 27 | 54 |
| 77 | 6 | 21 | 3 | 14 | 16 | 0 | 28 | 12 |
| 78 | 7 | 3 | 16 | 36 | 17 | 20 | 28 | 30 |
| 79 | 7 | 15 | 29 | 57 | 18 | 40 | 28 | 48 |
| 1780 | 7 | 27 | 43 | 19 | 20 | 0 | 29 | 6 |
| 1781 | 8 | 9 | 58 | 41 | 21 | 20 | 29 | 24 |
| 82 | 8 | 22 | 12 | 2 | 22 | 40 | 29 | 42 |
| 83 | 9 | 4 | 25 | 24 | 24 | 0 | 30 | 0 |
| 84 | 9 | 16 | 38 | 45 | 25 | 20 | 30 | 18 |
| 1785 | 9 | 28 | 54 | 7 | 26 | 40 | 30 | 36 |
| 1786 | 10 | 11 | 7 | 29 | 28 | 0 | 30 | 54 |
| 87 | 10 | 23 | 20 | 50 | 29 | 20 | 31 | 12 |
| 88 | 11 | 5 | 34 | 12 | 30 | 40 | 31 | 30 |
| 89 | 11 | 17 | 49 | 34 | 32 | 0 | 31 | 48 |
| 1790 | 0 | 0 | 2 | 55 | 33 | 20 | 32 | 6 |
| 1791 | 0 | 12 | 16 | 17 | 34 | 40 | 32 | 24 |
| 92 | 0 | 24 | 29 | 38 | 36 | 0 | 32 | 42 |
| 93 | 1 | 6 | 45 | 0 | 37 | 20 | 33 | 0 |
| 94 | 1 | 18 | 58 | 21 | 38 | 40 | 33 | 18 |
| 1795 | 2 | 1 | 11 | 43 | 40 | 0 | 33 | 36 |
| 1796 | 2 | 13 | 25 | 4 | 41 | 20 | 33 | 54 |
| 97 | 2 | 25 | 40 | 26 | 42 | 40 | 34 | 12 |
| 98 | 3 | 7 | 53 | 48 | 44 | 0 | 34 | 30 |
| 99 | 3 | 20 | 7 | 9 | 45 | 20 | 34 | 48 |
| 1800 | 4 | 2 | 20 | 31 | 46 | 40 | 35 | 0 |

## *MEDIUS MOTUS SATURNI AD DIES MENSIUM.*

| *Dies Mensis.* | JANUAR. *Med. Mot. Saturni.* | | | FEBRUA. *Med. Mot. Saturni.* | | | MARTII *Med. Mot. Saturni.* | | | APRILIS *Med. Mot. Saturni.* | | | MAII *Med. Mot. Saturni.* | | | JUNII *Med. Mot. Saturni.* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ |
| 1 | 0 | 2 | 1 | 1 | 4 | 18 | 2 | 0 | 33 | 3 | 2 | 50 | 4 | 3 | 7 | 5 | 5 | 24 |
| 2 | 0 | 4 | 1 | 1 | 6 | 18 | 2 | 2 | 34 | 3 | 4 | 51 | 4 | 5 | 7 | 5 | 7 | 24 |
| 3 | 0 | 6 | 2 | 1 | 8 | 19 | 2 | 4 | 34 | 3 | 6 | 51 | 4 | 7 | 8 | 5 | 9 | 25 |
| 4 | 0 | 8 | 2 | 1 | 10 | 19 | 2 | 6 | 35 | 3 | 8 | 52 | 4 | 9 | 8 | 5 | 11 | 26 |
| 5 | 0 | 10 | 3 | 1 | 12 | 20 | 2 | 8 | 35 | 3 | 10 | 52 | 4 | 11 | 9 | 5 | 13 | 26 |
| 6 | 0 | 12 | 3 | 1 | 14 | 20 | 2 | 10 | 36 | 3 | 12 | 53 | 4 | 13 | 10 | 5 | 15 | 27 |
| 7 | 0 | 14 | 4 | 1 | 16 | 21 | 2 | 12 | 36 | 3 | 14 | 54 | 4 | 15 | 10 | 5 | 17 | 27 |
| 8 | 0 | 16 | 4 | 1 | 18 | 22 | 2 | 14 | 37 | 3 | 16 | 54 | 4 | 17 | 11 | 5 | 19 | 28 |
| 9 | 0 | 18 | 5 | 1 | 20 | 22 | 2 | 16 | 38 | 3 | 18 | 55 | 4 | 19 | 11 | 5 | 21 | 28 |
| 10 | 0 | 20 | 6 | 1 | 22 | 23 | 2 | 18 | 38 | 3 | 20 | 55 | 4 | 21 | 12 | 5 | 23 | 29 |
| 11 | 0 | 22 | 6 | 1 | 24 | 23 | 2 | 20 | 39 | 3 | 22 | 56 | 4 | 23 | 12 | 5 | 25 | 29 |
| 12 | 0 | 24 | 7 | 1 | 26 | 24 | 2 | 22 | 39 | 3 | 24 | 56 | 4 | 25 | 13 | 5 | 27 | 30 |
| 13 | 0 | 26 | 7 | 1 | 28 | 24 | 2 | 24 | 40 | 3 | 26 | 57 | 4 | 27 | 13 | 5 | 29 | 30 |
| 14 | 0 | 28 | 8 | 1 | 30 | 25 | 2 | 26 | 40 | 3 | 28 | 57 | 4 | 29 | 14 | 5 | 31 | 31 |
| 15 | 0 | 30 | 8 | 1 | 32 | 25 | 2 | 28 | 41 | 3 | 30 | 58 | 4 | 31 | 14 | 5 | 33 | 32 |
| 16 | 0 | 32 | 9 | 1 | 34 | 26 | 2 | 30 | 41 | 3 | 32 | 58 | 4 | 33 | 15 | 5 | 35 | 32 |
| 17 | 0 | 34 | 9 | 1 | 36 | 26 | 2 | 32 | 41 | 3 | 34 | 59 | 4 | 35 | 16 | 5 | 37 | 33 |
| 18 | 0 | 36 | 10 | 1 | 38 | 27 | 2 | 34 | 42 | 3 | 37 | 0 | 4 | 37 | 16 | 5 | 39 | 33 |
| 19 | 0 | 38 | 10 | 1 | 40 | 28 | 2 | 36 | 43 | 3 | 39 | 0 | 4 | 39 | 17 | 5 | 41 | 34 |
| 20 | 0 | 40 | 11 | 1 | 42 | 28 | 2 | 38 | 44 | 3 | 41 | 1 | 4 | 41 | 17 | 5 | 43 | 34 |
| 21 | 0 | 42 | 12 | 1 | 44 | 29 | 2 | 40 | 44 | 3 | 43 | 1 | 4 | 43 | 18 | 5 | 45 | 35 |
| 22 | 0 | 44 | 12 | 1 | 46 | 29 | 2 | 42 | 45 | 3 | 45 | 2 | 4 | 45 | 18 | 5 | 47 | 35 |
| 23 | 0 | 46 | 13 | 1 | 48 | 30 | 2 | 44 | 45 | 3 | 47 | 2 | 4 | 47 | 19 | 5 | 49 | 36 |
| 24 | 0 | 48 | 13 | 1 | 50 | 30 | 2 | 46 | 46 | 3 | 49 | 3 | 4 | 49 | 19 | 5 | 51 | 36 |
| 25 | 0 | 50 | 14 | 1 | 52 | 31 | 2 | 48 | 46 | 3 | 51 | 3 | 4 | 51 | 20 | 5 | 53 | 37 |
| 26 | 0 | 52 | 14 | 1 | 54 | 31 | 2 | 50 | 47 | 3 | 53 | 4 | 4 | 53 | 20 | 5 | 55 | 38 |
| 27 | 0 | 54 | 15 | 1 | 56 | 32 | 2 | 52 | 47 | 3 | 55 | 4 | 4 | 55 | 21 | 5 | 57 | 38 |
| 28 | 0 | 56 | 15 | 1 | 58 | 33 | 2 | 54 | 48 | 3 | 57 | 5 | 4 | 57 | 22 | 5 | 59 | 39 |
| 29 | 0 | 58 | 16 | *In Anno* Bissextili *post* Februarium *adde unius diei motum.* | | | 2 | 56 | 48 | 3 | 59 | 6 | 4 | 59 | 22 | 6 | 1 | 39 |
| 30 | 1 | 0 | 17 | | | | 2 | 58 | 49 | 4 | 1 | 6 | 5 | 1 | 23 | 6 | 3 | 40 |
| 31 | 1 | 2 | 17 | | | | 3 | 0 | 50 | | | | 5 | 3 | 23 | | | |
| *Mot. Aphel.* | 0 | | 7 | | 0 | 13 | | 0 | 20 | | 0 | 27 | | 0 | 33 | | 0 | 40 |
| *Mot. Nodi* | 0 | | 2 | | 0 | 3 | | 0 | 5 | | 0 | 6 | | 0 | 8 | | 0 | 9 |

## *MEDII MOTVS SATVRNI. AD DIES MENSIVM.*

| Die Mensis. | JULII | AUGUST. | SEPTEM. | OCTOB. | NOVEM. | DECEMB. |
|---|---|---|---|---|---|---|
| | *Med. Mot. Saturni.* | *Med. Mot. Saturni.* | *Med. Mot. Saturni.* | *Med. Mot. Saturni.* | *Med. Mot. Saturni.* | *Med. Mot. Saturni.* |
| | ° ′ ″ | ° ′ ″ | ° ′ ″ | ° ′ ″ | ° ′ ″ | ° ′ ″ |
| 1 | 6 5 40 | 7 7 57 | 8 10 15 | 9 10 31 | 10 12 48 | 11 13 5 |
| 2 | 6 7 41 | 7 9 58 | 8 12 15 | 9 12 32 | 10 14 49 | 11 15 6 |
| 3 | 6 9 42 | 7 11 58 | 8 14 16 | 9 14 32 | 10 16 49 | 11 17 6 |
| 4 | 6 11 42 | 7 13 59 | 8 16 16 | 9 16 33 | 10 18 50 | 11 19 7 |
| 5 | 6 13 43 | 7 15 59 | 8 18 17 | 9 18 33 | 10 20 50 | 11 21 7 |
| 6 | 6 15 43 | 7 18 0 | 8 20 17 | 9 20 34 | 10 22 51 | 11 23 8 |
| 7 | 6 17 44 | 7 20 0 | 8 22 18 | 9 22 34 | 10 24 51 | 11 25 8 |
| 8 | 6 19 44 | 7 22 1 | 8 24 18 | 9 24 35 | 10 26 52 | 11 27 9 |
| 9 | 6 21 45 | 7 24 1 | 8 26 19 | 9 26 35 | 10 28 52 | 11 29 9 |
| 10 | 6 23 45 | 7 26 2 | 8 28 19 | 9 28 36 | 10 30 53 | 11 31 10 |
| 11 | 6 25 46 | 7 28 2 | 8 30 20 | 9 30 36 | 10 32 53 | 11 33 11 |
| 12 | 6 27 46 | 7 30 3 | 8 32 20 | 9 32 37 | 10 34 54 | 11 35 11 |
| 13 | 6 29 47 | 7 32 4 | 8 34 21 | 9 34 37 | 10 36 55 | 11 37 12 |
| 14 | 6 31 48 | 7 34 4 | 8 36 21 | 9 36 38 | 10 38 55 | 11 39 12 |
| 15 | 6 33 48 | 7 36 5 | 8 38 22 | 9 38 39 | 10 40 56 | 11 41 13 |
| 16 | 6 35 49 | 7 38 5 | 8 40 23 | 9 40 39 | 10 42 56 | 11 43 13 |
| 17 | 6 37 49 | 7 40 6 | 8 42 23 | 9 42 40 | 10 44 57 | 11 45 14 |
| 18 | 6 39 50 | 7 42 6 | 8 44 24 | 9 44 40 | 10 46 58 | 11 47 14 |
| 19 | 6 41 50 | 7 44 7 | 8 46 25 | 9 46 41 | 10 48 58 | 11 49 15 |
| 20 | 6 43 51 | 7 46 7 | 8 48 25 | 9 48 42 | 10 50 59 | 11 51 15 |
| 21 | 6 45 51 | 7 48 8 | 8 50 26 | 9 50 42 | 10 52 59 | 11 53 16 |
| 22 | 6 47 52 | 7 50 9 | 8 52 26 | 9 52 43 | 10 55 0 | 11 55 16 |
| 23 | 6 49 52 | 7 52 9 | 8 54 27 | 9 54 43 | 10 57 0 | 11 57 17 |
| 24 | 6 51 53 | 7 54 10 | 8 56 27 | 9 56 44 | 10 59 1 | 11 59 18 |
| 25 | 6 53 54 | 7 56 10 | 8 58 28 | 9 58 44 | 11 1 2 | 12 1 18 |
| 26 | 6 55 54 | 7 58 11 | 9 0 28 | 10 0 45 | 11 3 2 | 12 3 19 |
| 27 | 6 57 55 | 8 0 11 | 9 2 29 | 10 2 46 | 11 5 3 | 12 5 19 |
| 28 | 6 59 55 | 8 2 12 | 9 4 29 | 10 4 46 | 11 7 3 | 12 7 20 |
| 29 | 7 1 56 | 8 4 13 | 9 6 30 | 10 6 47 | 11 9 4 | 12 9 20 |
| 30 | 7 3 56 | 8 6 13 | 9 8 31 | 10 8 47 | 11 11 5 | 12 11 21 |
| 31 | 7 5 57 | 8 8 14 | | 10 10 48 | | 12 13 21 |
| | | | ′ ″ | | ′ ″ | |
| *Mot. Aphel.* | 0 47 | 0 53 | 1 0 | 1 7 | 1 13 | 1 20 |
| *Mot. Nodi* | 0 11 | 0 12 | 0 13 | 0 15 | 0 16 | 0 18 |

## IN ANNORUM CENTURIIS.

| Annis Julian. Collect. | Medius Motus Saturni. S | o | ′ | ″ | Æquatio Secularis o | ′ | Motus Aphelii Saturni. S | o | ′ | ″ | Motus Nodi Saturni. o | ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 4 | 23 | 6 | 0 | 0 | 1,4 | 0 | 2 | 13 | 20 | 0 | 30 |
| 200 | 9 | 16 | 12 | 0 | 0 | 5,6 | 0 | 4 | 26 | 40 | 1 | 0 |
| 300 | 2 | 9 | 18 | 0 | 0 | 12,5 | 0 | 6 | 40 | 0 | 1 | 30 |
| 400 | 7 | 2 | 24 | 0 | 0 | 22,2 | 0 | 8 | 53 | 20 | 2 | 0 |
| 500 | 11 | 25 | 30 | 0 | 0 | 34,8 | 0 | 11 | 6 | 40 | 2 | 30 |
| 600 | 4 | 18 | 36 | 0 | 0 | 50,0 | 0 | 13 | 20 | 0 | 3 | 0 |
| 700 | 9 | 11 | 42 | 0 | 1 | 8,1 | 0 | 15 | 33 | 20 | 3 | 30 |
| 800 | 2 | 4 | 48 | 0 | 1 | 29,0 | 0 | 17 | 46 | 40 | 4 | 0 |
| 900 | 6 | 27 | 54 | 0 | 1 | 52,6 | 0 | 20 | 0 | 0 | 4 | 30 |
| 1000 | 11 | 21 | 0 | 0 | 2 | 19,0 | 0 | 22 | 13 | 20 | 5 | 0 |
| 1100 | 4 | 14 | 6 | 0 | 2 | 48,2 | 0 | 24 | 26 | 40 | 5 | 30 |
| 1200 | 9 | 7 | 12 | 0 | 3 | 20,2 | 0 | 26 | 40 | 0 | 6 | 0 |
| 1300 | 2 | 0 | 18 | 0 | 3 | 55,0 | 0 | 28 | 53 | 20 | 6 | 30 |
| 1400 | 6 | 23 | 24 | 0 | 4 | 32,5 | 1 | 1 | 6 | 40 | 7 | 0 |
| 1500 | 11 | 16 | 30 | 0 | 5 | 12,8 | 1 | 3 | 20 | 0 | 7 | 30 |
| 1600 | 4 | 9 | 36 | 0 | 5 | 55,9 | 1 | 5 | 33 | 20 | 8 | 0 |
| 1700 | 9 | 2 | 42 | 0 | 6 | 41,7 | 1 | 7 | 46 | 40 | 8 | 30 |
| 1800 | 1 | 25 | 48 | 0 | 7 | 30,4 | 1 | 10 | 0 | 0 | 9 | 0 |
| 1900 | 6 | 18 | 54 | 0 | 8 | 21,8 | 1 | 12 | 13 | 20 | 9 | 30 |
| 2000 | 11 | 12 | 0 | 0 | 9 | 16,1 | 1 | 14 | 26 | 40 | 10 | 0 |
| 2100 | 4 | 5 | 6 | 0 | 10 | 13,1 | 1 | 16 | 40 | 0 | 10 | 30 |
| 2200 | 8 | 28 | 12 | 0 | 11 | 12,9 | 1 | 18 | 53 | 20 | 11 | 0 |
| 2300 | 1 | 21 | 18 | 0 | 12 | 15,4 | 1 | 21 | 6 | 40 | 11 | 30 |
| 2400 | 6 | 14 | 24 | 0 | 13 | 20,8 | 1 | 23 | 20 | 0 | 12 | 0 |
| 2500 | 11 | 7 | 30 | 0 | 14 | 28,9 | 1 | 25 | 33 | 20 | 12 | 30 |
| 2600 | 4 | 0 | 36 | 0 | 15 | 39,7 | 1 | 27 | 46 | 40 | 13 | 0 |
| 2700 | 8 | 23 | 42 | 0 | 16 | 53 4 | 2 | 0 | 0 | 0 | 13 | 30 |
| 2800 | 1 | 16 | 48 | 0 | 18 | 9,8 | 2 | 2 | 13 | 20 | 14 | 0 |
| 2900 | 6 | 9 | 54 | 0 | 19 | 29,1 | 2 | 4 | 26 | 40 | 14 | 30 |
| 3000 | 11 | 3 | 0 | 0 | 20 | 51,1 | 2 | 6 | 40 | 0 | 15 | 0 |

## IN HORIS ET MIN.

| Medius Motus Saturni. ′ H | ″ ′ | ‴ ″ | ′ H | ″ ′ | ‴ ″ |
|---|---|---|---|---|---|
| 1 | 0 | 5 | 31 | 2 | 36 |
| 2 | 0 | 10 | 32 | 2 | 41 |
| 3 | 0 | 15 | 33 | 2 | 46 |
| 4 | 0 | 20 | 34 | 2 | 51 |
| 5 | 0 | 25 | 35 | 2 | 56 |
| 6 | 0 | 30 | 36 | 3 | 1 |
| 7 | 0 | 35 | 37 | 3 | 6 |
| 8 | 0 | 40 | 38 | 3 | 11 |
| 9 | 0 | 45 | 39 | 3 | 16 |
| 10 | 0 | 50 | 40 | 3 | 21 |
| 11 | 0 | 55 | 41 | 3 | 26 |
| 12 | 1 | 0 | 42 | 3 | 31 |
| 13 | 1 | 5 | 43 | 3 | 36 |
| 14 | 1 | 10 | 44 | 3 | 41 |
| 15 | 1 | 15 | 45 | 3 | 46 |
| 16 | 1 | 20 | 46 | 3 | 51 |
| 17 | 1 | 25 | 47 | 3 | 56 |
| 18 | 1 | 30 | 48 | 4 | 1 |
| 19 | 1 | 35 | 49 | 4 | 6 |
| 20 | 1 | 40 | 50 | 4 | 11 |
| 21 | 1 | 45 | 51 | 4 | 16 |
| 22 | 1 | 50 | 52 | 4 | 21 |
| 23 | 1 | 55 | 53 | 4 | 26 |
| 24 | 2 | 1 | 54 | 4 | 31 |
| 25 | 2 | 6 | 55 | 4 | 36 |
| 26 | 2 | 11 | 56 | 4 | 41 |
| 27 | 2 | 16 | 57 | 4 | 46 |
| 28 | 2 | 21 | 58 | 4 | 51 |
| 29 | 2 | 26 | 59 | 4 | 56 |
| 30 | 2 | 31 | 60 | 5 | 1 |

*Æquatio Secularis subtrahenda est e medio Motu* Saturni *tam in Seculis præteritis quam futuris.*

# TABULA ÆQUATIONUM SATURNI.

*Anomalia media Saturni.*

| Gr. | Sig. 0. Subtr. | Diff. | Sig. I. Subtr. | Diff. | Sig. II. Subtr. | Diff. | |
|---|---|---|---|---|---|---|---|
| | ° ′ ″ | ′ ″ | ° ′ ″ | ′ ″ | ° ′ ″ | ′ ″ | |
| 0 | 0 0 0 | | 3 4 27 | | 5 27 13 | | 30 |
| | | 6 23 | | 5 39 | | 3 36 | |
| 1 | 0 6 23 | | 3 10 6 | | 5 30 49 | | 29 |
| 2 | 0 12 46 | 6 23 | 3 15 43 | 5 37 | 5 34 19 | 3 30 | 28 |
| 3 | 0 19 9 | 6 23 | 3 21 16 | 5 33 | 5 37 43 | 3 24 | 27 |
| 4 | 0 25 31 | 6 22 | 3 26 47 | 5 30 | 5 41 2 | 3 19 | 26 |
| 5 | 0 31 53 | 6 22 | 3 32 14 | 5 27 | 5 44 15 | 3 13 | 25 |
| | | 6 22 | | 5 24 | | 3 7 | |
| 6 | 0 38 15 | | 3 37 39 | | 5 47 22 | | 24 |
| 7 | 0 44 36 | 6 21 | 3 42 59 | 5 21 | 5 50 23 | 3 1 | 23 |
| 8 | 0 50 56 | 6 20 | 3 48 16 | 5 17 | 5 53 19 | 2 55 | 22 |
| 9 | 0 57 16 | 6 20 | 3 53 29 | 5 13 | 5 56 9 | 2 50 | 21 |
| 10 | 1 3 34 | 6 18 | 3 58 40 | 5 10 | 5 58 53 | 2 44 | 20 |
| | | 6 17 | | 5 6 | | 2 38 | |
| 11 | 1 9 52 | | 4 3 46 | | 6 1 31 | | 19 |
| 12 | 1 16 9 | 6 17 | 4 8 49 | 5 3 | 6 4 2 | 2 31 | 18 |
| 13 | 1 22 25 | 6 16 | 4 13 48 | 4 59 | 6 6 27 | 2 25 | 17 |
| 14 | 1 28 39 | 6 14 | 4 18 43 | 4 55 | 6 8 47 | 2 19 | 16 |
| 15 | 1 34 52 | 6 13 | 4 23 33 | 4 50 | 6 11 0 | 2 13 | 15 |
| | | 6 12 | | 4 46 | | 2 6 | |
| 16 | 1 41 4 | | 4 28 20 | | 6 13 6 | | 14 |
| 17 | 1 47 14 | 6 10 | 4 33 2 | 4 42 | 6 15 7 | 2 0 | 13 |
| 18 | 1 53 23 | 6 9 | 4 37 41 | 4 38 | 6 17 1 | 1 54 | 12 |
| 19 | 1 59 30 | 6 7 | 4 42 14 | 4 33 | 6 18 48 | 1 47 | 11 |
| 20 | 2 5 35 | 6 5 | 4 46 44 | 4 29 | 6 20 28 | 1 40 | 10 |
| | | 6 3 | | 4 24 | | 1 34 | |
| 21 | 2 11 38 | | 4 51 8 | | 6 22 2 | | 9 |
| 22 | 2 17 40 | 6 2 | 4 55 29 | 4 20 | 6 23 30 | 1 28 | 8 |
| 23 | 2 23 39 | 5 59 | 4 59 44 | 4 15 | 6 24 51 | 1 21 | 7 |
| 24 | 2 29 36 | 5 57 | 5 3 55 | 4 11 | 6 26 5 | 1 14 | 6 |
| 25 | 2 35 31 | 5 55 | 5 8 1 | 4 6 | 6 27 12 | 1 7 | 5 |
| | | 5 52 | | 4 1 | | 1 0 | |
| 26 | 2 41 23 | | 5 12 2 | | 6 28 12 | | 4 |
| 27 | 2 47 13 | 5 50 | 5 15 58 | 3 56 | 6 29 5 | 0 53 | 3 |
| 28 | 2 53 0 | 5 47 | 5 19 49 | 3 51 | 6 29 52 | 0 46 | 2 |
| 29 | 2 58 45 | 5 45 | 5 23 34 | 3 45 | 6 30 31 | 0 39 | 1 |
| 30 | 3 4 27 | 5 42 | 5 27 13 | 3 39 | 6 31 3 | 0 32 | 0 |
| Gr. | Sig. XI. Adde. | Diff. | Sig. X. Adde. | Diff. | Sig. IX. Adde. | Diff. | Gr. |

# TABULA ÆQUATIONUM SATURNI.

## Anomalia media Saturni.

| Gr. | Sig. III. Subtr. ° ′ ″ | Diff. ′ ″ | Sig. IV. Subtr. ° ′ ″ | Diff. ′ ″ | Sig. V. Subtr. ° ′ ″ | Diff. ′ ″ | |
|---|---|---|---|---|---|---|---|
| 0 | 6 31 3 | 0 26 | 5 51 18 | 3 12 | 3 28 41 | 6 12 | 30 |
| 1 | 6 31 29 | 0 19 | 5 48 6 | 3 19 | 3 22 29 | 6 17 | 29 |
| 2 | 6 31 48 | 0 12 | 5 44 47 | 3 25 | 3 16 12 | 6 21 | 28 |
| 3 | 6 32 0 | 0 4 | 5 41 22 | 3 32 | 3 9 51 | 6 25 | 27 |
| 4 | 6 32 4 | 0 3 | 5 37 50 | 3 40 | 3 3 26 | 6 29 | 26 |
| 5 | 6 32 1 | 0 10 | 5 34 10 | 3 47 | 2 56 57 | 6 33 | 25 |
| 6 | 6 31 51 | 0 18 | 5 30 23 | 3 53 | 2 50 24 | 6 37 | 24 |
| 7 | 6 31 33 | 0 25 | 5 26 30 | 4 0 | 2 43 47 | 6 40 | 23 |
| 8 | 6 31 8 | 0 32 | 5 22 30 | 4 7 | 2 37 7 | 6 44 | 22 |
| 9 | 6 30 36 | 0 39 | 5 18 23 | 4 13 | 2 30 23 | 6 48 | 21 |
| 10 | 6 29 58 | 0 47 | 5 14 10 | 4 20 | 2 23 35 | 6 51 | 20 |
| 11 | 6 29 11 | 0 54 | 5 9 50 | 4 26 | 2 16 44 | 6 53 | 19 |
| 12 | 6 28 17 | 1 1 | 5 5 24 | 4 33 | 2 9 51 | 6 56 | 18 |
| 13 | 6 27 16 | 1 8 | 5 0 51 | 4 39 | 2 2 54 | 6 59 | 17 |
| 14 | 6 26 8 | 1 16 | 4 56 12 | 4 45 | 1 55 55 | 7 2 | 16 |
| 15 | 6 24 52 | 1 23 | 4 51 26 | 4 51 | 1 48 53 | 7 4 | 15 |
| 16 | 6 23 29 | 1 31 | 4 46 35 | 4 57 | 1 41 49 | 7 6 | 14 |
| 17 | 6 21 58 | 1 38 | 4 41 38 | 5 3 | 1 34 43 | 7 9 | 13 |
| 18 | 6 20 20 | 1 45 | 4 36 35 | 5 9 | 1 27 34 | 7 11 | 12 |
| 19 | 6 18 35 | 1 52 | 4 31 26 | 5 16 | 1 20 23 | 7 13 | 11 |
| 20 | 6 16 43 | 2 0 | 4 26 10 | 5 21 | 1 13 10 | 7 14 | 10 |
| 21 | 6 14 42 | 2 7 | 4 20 49 | 5 27 | 1 5 56 | 7 16 | 9 |
| 22 | 6 12 35 | 2 14 | 4 15 22 | 5 33 | 0 58 40 | 7 17 | 8 |
| 23 | 6 10 21 | 2 21 | 4 9 49 | 5 38 | 0 51 23 | 7 18 | 7 |
| 24 | 6 8 0 | 2 29 | 4 4 11 | 5 42 | 0 44 5 | 7 19 | 6 |
| 25 | 6 5 31 | 2 36 | 3 58 29 | 5 47 | 0 36 46 | 7 21 | 5 |
| 26 | 6 2 55 | 2 43 | 3 52 42 | 5 53 | 0 29 25 | 7 21 | 4 |
| 27 | 6 0 11 | 2 50 | 3 46 49 | 5 58 | 0 22 4 | 7 21 | 3 |
| 28 | 5 57 21 | 2 58 | 3 40 51 | 6 3 | 0 14 43 | 7 21 | 2 |
| 29 | 5 54 23 | 3 5 | 3 34 48 | 6 7 | 0 7 22 | 7 21 | 1 |
| 30 | 5 51 18 | | 3 28 41 | | 0 0 0 | 7 22 | 0 |
| Gr. | Sig. VIII. Adde. | Diff. | Sig. VII. Adde. | Diff. | Sig. VI. Adde. | Diff. | Gr. |

## LOGARITHMI DISTANTIARUM SATURNI A SOLE.

*Anomalia media Saturni.*

| Gr. | Sig. o. Logarith. | Differentia. | Sig. I. Logarith. | Differentia. | Sig. II. Logarith. | Differentia. | |
|---|---|---|---|---|---|---|---|
| 0 | 6 003628 | | 6 000791 | | 5 992741 | | 30 |
| | | 3 | | 189 | | 344 | |
| 1 | 6 003625 | | 6 000601 | | 5 992397 | | 29 |
| | | 10 | | 195 | | 349 | |
| 2 | 6 003615 | | 6 000406 | | 5 992048 | | 28 |
| | | 16 | | 201 | | 352 | |
| 3 | 6 003599 | | 6 000205 | | 5 991696 | | 27 |
| | | 22 | | 207 | | 356 | |
| 4 | 6 003577 | | 5 999998 | | 5 991340 | | 26 |
| | | 29 | | 212 | | 360 | |
| 5 | 6 003548 | | 5 999786 | | 5 990979 | | 25 |
| | | 35 | | 218 | | 364 | |
| 6 | 6 003513 | | 5 999568 | | 5 990615 | | 24 |
| | | 42 | | 224 | | 368 | |
| 7 | 6 003471 | | 5 999344 | | 5 990247 | | 23 |
| | | 47 | | 230 | | 372 | |
| 8 | 6 003424 | | 5 999114 | | 5 989875 | | 22 |
| | | 55 | | 236 | | 375 | |
| 9 | 6 003369 | | 5 998878 | | 5 989500 | | 21 |
| | | 60 | | 241 | | 378 | |
| 10 | 6 003309 | | 5 998637 | | 5 989122 | | 20 |
| | | 67 | | 246 | | 383 | |
| 11 | 6 003242 | | 5 998390 | | 5 988739 | | 19 |
| | | 72 | | 252 | | 386 | |
| 12 | 6 003170 | | 5 998138 | | 5 988353 | | 18 |
| | | 80 | | 256 | | 389 | |
| 13 | 6 003090 | | 5 997882 | | 5 987964 | | 17 |
| | | 86 | | 262 | | 392 | |
| 14 | 6 003004 | | 5 997620 | | 5 987572 | | 16 |
| | | 92 | | 268 | | 395 | |
| 15 | 6 002911 | | 5 997351 | | 5 987177 | | 15 |
| | | 98 | | 273 | | 398 | |
| 16 | 6 002813 | | 5 997078 | | 5 986779 | | 14 |
| | | 105 | | 278 | | 400 | |
| 17 | 6 002708 | | 5 996800 | | 5 986378 | | 13 |
| | | 110 | | 283 | | 403 | |
| 18 | 6 002598 | | 5 996517 | | 5 985975 | | 12 |
| | | 117 | | 288 | | 405 | |
| 19 | 6 002481 | | 5 996229 | | 5 985570 | | 11 |
| | | 123 | | 294 | | 408 | |
| 20 | 6 002358 | | 5 995935 | | 5 985161 | | 10 |
| | | 129 | | 298 | | 411 | |
| 21 | 6 002229 | | 5 995637 | | 5 984750 | | 9 |
| | | 135 | | 303 | | 414 | |
| 22 | 6 002094 | | 5 995334 | | 5 984336 | | 8 |
| | | 142 | | 308 | | 416 | |
| 23 | 6 001952 | | 5 995026 | | 5 983920 | | 7 |
| | | 148 | | 313 | | 418 | |
| 24 | 6 001804 | | 5 994713 | | 5 983502 | | 6 |
| | | 154 | | 317 | | 420 | |
| 25 | 6 001650 | | 5 994396 | | 5 983082 | | 5 |
| | | 160 | | 322 | | 421 | |
| 26 | 6 001490 | | 5 994074 | | 5 982660 | | 4 |
| | | 166 | | 327 | | 423 | |
| 27 | 6 001324 | | 5 993747 | | 5 982237 | | 3 |
| | | 172 | | 331 | | 425 | |
| 28 | 6 001152 | | 5 993416 | | 5 981812 | | 2 |
| | | 177 | | 335 | | 426 | |
| 29 | 6 000974 | | 5 993081 | | 5 981386 | | 1 |
| | | 183 | | 340 | | 428 | |
| 30 | 6 000791 | | 5 992741 | | 5 980957 | | 0 |
| | Sig. XI. | *Diff.* | Sig. X. | *Diff.* | Sig. IX. | *Diff.* | *Gr.* |

## LOGARITHMI DISTANTIARUM SATURNI A SOLE.

*Anomalia media Saturni.*

| Gr. | Sig. III. Logarith. | Differentia. | Sig. IV. Logarith. | Differentia. | Sig. V. Logarith. | Differentia. | |
|---|---|---|---|---|---|---|---|
| 0 | 5 980957 | | 5 968128 | | 5 957965 | | 30 |
| | | 429 | | 404 | | 247 | |
| 1 | 5 980528 | | 5 967724 | | 5 957718 | | 29 |
| | | 430 | | 401 | | 240 | |
| 2 | 5 980098 | | 5 967323 | | 5 957478 | | 28 |
| | | 431 | | 397 | | 233 | |
| 3 | 5 979667 | | 5 966926 | | 5 957245 | | 27 |
| | | 432 | | 394 | | 225 | |
| 4 | 5 979234 | | 5 966532 | | 5 957020 | | 26 |
| | | 433 | | 391 | | 217 | |
| 5 | 5 978801 | | 5 966141 | | 5 956803 | | 25 |
| | | 433 | | 387 | | 210 | |
| 6 | 5 978368 | | 5 965754 | | 5 956593 | | 24 |
| | | 434 | | 383 | | 202 | |
| 7 | 5 977934 | | 5 965371 | | 5 956391 | | 23 |
| | | 435 | | 379 | | 194 | |
| 8 | 5 977499 | | 5 964992 | | 5 956197 | | 22 |
| | | 435 | | 375 | | 187 | |
| 9 | 5 977064 | | 5 964617 | | 5 956010 | | 21 |
| | | 435 | | 370 | | 178 | |
| 10 | 5 976629 | | 5 964247 | | 5 955832 | | 20 |
| | | 435 | | 366 | | 170 | |
| 11 | 5 976194 | | 5 963881 | | 5 955662 | | 19 |
| | | 434 | | 361 | | 162 | |
| 12 | 5 975760 | | 5 963520 | | 5 955500 | | 18 |
| | | 434 | | 357 | | 153 | |
| 13 | 5 975326 | | 5 963163 | | 5 955347 | | 17 |
| | | 434 | | 351 | | 145 | |
| 14 | 5 974892 | | 5 962811 | | 5 955202 | | 16 |
| | | 433 | | 346 | | 137 | |
| 15 | 5 974459 | | 5 962465 | | 5 955065 | | 15 |
| | | 433 | | 341 | | 128 | |
| 16 | 5 974026 | | 5 962123 | | 5 954937 | | 14 |
| | | 432 | | 336 | | 120 | |
| 17 | 5 973594 | | 5 961787 | | 5 954817 | | 13 |
| | | 431 | | 330 | | 111 | |
| 18 | 5 973163 | | 5 961456 | | 5 954706 | | 12 |
| | | 429 | | 325 | | 102 | |
| 19 | 5 972734 | | 5 961131 | | 5 954604 | | 11 |
| | | 428 | | 319 | | 94 | |
| 20 | 5 972306 | | 5 960812 | | 5 954510 | | 10 |
| | | 426 | | 313 | | 85 | |
| 21 | 5 971879 | | 5 960499 | | 5 954425 | | 9 |
| | | 425 | | 307 | | 76 | |
| 22 | 5 971454 | | 5 960191 | | 5 954349 | | 8 |
| | | 423 | | 301 | | 67 | |
| 23 | 5 971031 | | 5 959890 | | 5 954282 | | 7 |
| | | 422 | | 295 | | 58 | |
| 24 | 5 970609 | | 5 959595 | | 5 954224 | | 6 |
| | | 420 | | 288 | | 50 | |
| 25 | 5 970189 | | 5 959306 | | 5 954174 | | 5 |
| | | 417 | | 281 | | 40 | |
| 26 | 5 969772 | | 5 959025 | | 5 954134 | | 4 |
| | | 414 | | 275 | | 31 | |
| 27 | 5 969357 | | 5 958749 | | 5 954103 | | 3 |
| | | 412 | | 268 | | 22 | |
| 28 | 5 968945 | | 5 958481 | | 5 954080 | | 2 |
| | | 410 | | 261 | | 13 | |
| 29 | 5 968535 | | 5 958219 | | 5 954067 | | 1 |
| | | 407 | | 254 | | 4 | |
| 30 | 5 968128 | | 5 957965 | | 5 954062 | | 0 |
| | Sig. VIII. | *Diff.* | Sig. VII. | *Diff.* | Sig. VI. | *Diff.* | *Gr.* |

# TABVLA LATITVDINARIA SATVRNI.

| Argument. Latitudinis. | Sig. 0. Bor. Sig. 6. Aust Inclinatio | | | Subtr. Subtr. Reduct. | | Curtatio | | Sig. 1. Bor. Sig. 7. Aust. Inclinatio | | | Subtr. Subtr. Reduct. | | Curtatio | | Sig. 2. Bor Sig. 8. Aust Inclinatio | | | Subtr. Subtr. Reduct. | | Curtatio | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gr. | o | ′ | ″ | ′ | ″ | Log. | | o | ′ | ″ | ′ | ″ | Log. | | o | ′ | ″ | ′ | ″ | Log. | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 | 15 | 4 | 1 | 25 | 103 | | 2 | 10 | 2 | 1 | 25 | 310 | 30 |
| 1 | 0 | 2 | 37 | 0 | 4 | 0 | | 1 | 17 | 19 | 1 | 26 | 110 | | 2 | 11 | 20 | 1 | 23 | 316 | 29 |
| 2 | 0 | 5 | 14 | 0 | 8 | 1 | | 1 | 19 | 33 | 1 | 27 | 116 | | 2 | 12 | 35 | 1 | 21 | 322 | 28 |
| 3 | 0 | 7 | 51 | 0 | 11 | 1 | | 1 | 21 | 46 | 1 | 29 | 123 | | 2 | 13 | 47 | 1 | 19 | 328 | 27 |
| 4 | 0 | 10 | 28 | 0 | 15 | 2 | | 1 | 23 | 58 | 1 | 31 | 129 | | 2 | 14 | 58 | 1 | 17 | 334 | 26 |
| 5 | 0 | 13 | 5 | 0 | 18 | 3 | | 1 | 26 | 7 | 1 | 32 | 136 | | 2 | 16 | 5 | 1 | 15 | 340 | 25 |
| 6 | 0 | 15 | 41 | 0 | 21 | 5 | | 1 | 28 | 15 | 1 | 33 | 143 | | 2 | 17 | 10 | 1 | 13 | 345 | 24 |
| 7 | 0 | 18 | 18 | 0 | 24 | 6 | | 1 | 30 | 21 | 1 | 34 | 150 | | 2 | 18 | 13 | 1 | 11 | 350 | 23 |
| 8 | 0 | 20 | 53 | 0 | 27 | 8 | | 1 | 32 | 26 | 1 | 35 | 157 | | 2 | 19 | 13 | 1 | 9 | 355 | 22 |
| 9 | 0 | 23 | 29 | 0 | 31 | 10 | | 1 | 34 | 29 | 1 | 35 | 164 | | 2 | 20 | 11 | 1 | 6 | 360 | 21 |
| 10 | 0 | 26 | 4 | 0 | 34 | 12 | | 1 | 36 | 30 | 1 | 36 | 171 | | 2 | 21 | 6 | 1 | 3 | 365 | 20 |
| 11 | 0 | 28 | 39 | 0 | 37 | 15 | | 1 | 38 | 30 | 1 | 36 | 178 | | 2 | 21 | 59 | 1 | 1 | 370 | 19 |
| 12 | 0 | 31 | 13 | 0 | 41 | 18 | | 1 | 40 | 28 | 1 | 37 | 185 | | 2 | 22 | 49 | 0 | 58 | 374 | 18 |
| 13 | 0 | 33 | 46 | 0 | 44 | 21 | | 1 | 42 | 24 | 1 | 37 | 192 | | 2 | 23 | 36 | 0 | 55 | 378 | 17 |
| 14 | 0 | 36 | 19 | 0 | 47 | 24 | | 1 | 44 | 18 | 1 | 38 | 200 | | 2 | 24 | 21 | 0 | 52 | 382 | 16 |
| 15 | 0 | 38 | 51 | 0 | 49 | 28 | | 1 | 46 | 10 | 1 | 38 | 207 | | 2 | 25 | 3 | 0 | 49 | 386 | 15 |
| 16 | 0 | 41 | 23 | 0 | 52 | 32 | | 1 | 48 | 0 | 1 | 38 | 214 | | 2 | 25 | 42 | 0 | 47 | 389 | 14 |
| 17 | 0 | 43 | 54 | 0 | 55 | 36 | | 1 | 49 | 48 | 1 | 38 | 221 | | 2 | 26 | 19 | 0 | 44 | 393 | 13 |
| 18 | 0 | 46 | 24 | 0 | 58 | 40 | | 1 | 51 | 35 | 1 | 37 | 228 | | 2 | 26 | 53 | 0 | 41 | 396 | 12 |
| 19 | 0 | 48 | 53 | 1 | 1 | 44 | | 1 | 53 | 19 | 1 | 37 | 236 | | 2 | 27 | 24 | 0 | 37 | 399 | 11 |
| 20 | 0 | 51 | 21 | 1 | 3 | 48 | | 1 | 55 | 1 | 1 | 36 | 243 | | 2 | 27 | 53 | 0 | 34 | 401 | 10 |
| 21 | 0 | 53 | 48 | 1 | 6 | 53 | | 1 | 56 | 41 | 1 | 36 | 250 | | 2 | 28 | 19 | 0 | 31 | 403 | 9 |
| 22 | 0 | 56 | 14 | 1 | 9 | 58 | | 1 | 58 | 19 | 1 | 35 | 257 | | 2 | 28 | 42 | 0 | 27 | 406 | 8 |
| 23 | 0 | 58 | 39 | 1 | 11 | 63 | | 1 | 59 | 55 | 1 | 35 | 264 | | 2 | 29 | 3 | 0 | 24 | 408 | 7 |
| 24 | 1 | 1 | 4 | 1 | 13 | 68 | | 2 | 1 | 29 | 1 | 34 | 271 | | 2 | 29 | 21 | 0 | 21 | 409 | 6 |
| 25 | 1 | 3 | 27 | 1 | 15 | 74 | | 2 | 3 | 0 | 1 | 33 | 277 | | 2 | 29 | 36 | 0 | 18 | 410 | 5 |
| 26 | 1 | 5 | 49 | 1 | 17 | 79 | | 2 | 4 | 29 | 1 | 32 | 284 | | 2 | 29 | 48 | 0 | 15 | 411 | 4 |
| 27 | 1 | 8 | 9 | 1 | 19 | 85 | | 2 | 5 | 56 | 1 | 31 | 291 | | 2 | 29 | 57 | 0 | 11 | 412 | 3 |
| 28 | 1 | 10 | 29 | 1 | 21 | 91 | | 2 | 7 | 20 | 1 | 29 | 297 | | 2 | 30 | 4 | 0 | 8 | 413 | 2 |
| 29 | 1 | 12 | 47 | 1 | 23 | 97 | | 2 | 8 | 42 | 1 | 27 | 303 | | 2 | 30 | 8 | 0 | 4 | 414 | 1 |
| 30 | 1 | 15 | 4 | 1 | 25 | 103 | | 2 | 10 | 2 | 1 | 25 | 310 | | 2 | 30 | 10 | 0 | 0 | 414 | 0 |
| | Sig. 11. Aust. Sig. 5. Bor. | | | Adde. Adde. | | | | Sig. 10. Aust. Sig. 4. Bor. | | | Adde. Adde. | | | | Sig. 9. Aust. Sig. 3. Bor. | | | Adde. Adde. | | | Gr. |

## SERIES OPPOSITIONVM SOLIS ET SATVRNI NOSTRA ÆTATE FACTARVM CVM COMPVTO PRÆCEDENTE COLLATA.

| *Oppositionum Tempora æquata* Londini. | | | | *Locus Solis verus.* | | | *Anom. med. Saturni.* | | | | *Saturnus Heliocentricus comp.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | D. | H. | ′ | ° | ′ | ″ | ☌ | ° | ′ | ″ | | ° | ′ | ″ | ′ | ″ |
| 1658 | *Mart.* | 24 | 17 | 20 | ♈ | 14 | 35 | 51 | 9 | 10 | 43 | 58 | ♓ | 14 | 40 | 31 | +4 | 40 |
| 1659 | *Apr.* | 6 | 10 | 23 | ♈ | 26 | 47 | 37 | 9 | 23 | 21 | 30 | ♓ | 26 | 50 | 9 | +2 | 32 |
| 1660 | *Apr.* | 17 | 21 | 50 | ♉ | 8 | 40 | 56 | 10 | 5 | 58 | 32 | ♏ | 8 | 43 | 54 | +2 | 58 |
| 1661 | *Apr.* | 30 | 5 | 52 | ♉ | 20 | 21 | 46 | 10 | 18 | 35 | 18 | ♏ | 20 | 24 | 20 | +2 | 34 |
| 1662 | *Maii* | 12 | 10 | 55 | ♊ | 1 | 51 | 53 | 11 | 1 | 11 | 47 | ♐ | 1 | 54 | 10 | +2 | 17 |
| 1663 | *Maii* | 24 | 13 | 28 | ♊ | 13 | 13 | 20 | 11 | 13 | 48 | 7 | ♐ | 13 | 16 | 29 | +3 | 9 |
| 1664 | *Jun.* | 4 | 15 | 16 | ♊ | 24 | 31 | 10 | 11 | 26 | 24 | 20 | ♐ | 24 | 34 | 30 | +3 | 20 |
| 1665 | *Jun.* | 16 | 16 | 59 | ♋ | 5 | 47 | 48 | 0 | 9 | 0 | 36 | ♑ | 5 | 51 | 22 | +3 | 34 |
| 1666 | *Jun.* | 28 | 19 | 44 | ♋ | 17 | 6 | 45 | 0 | 21 | 37 | 0 | ♑ | 17 | 10 | 29 | +3 | 44 |
| 1667 | *Julii* | 11 | 0 | 24 | ♋ | 28 | 31 | 10 | 1 | 4 | 13 | 25 | ♑ | 28 | 35 | 0 | +3 | 50 |
| 1668 | *Julii* | 22 | 7 | 53 | ♌ | 10 | 3 | 56 | 1 | 16 | 50 | 6 | ♒ | 10 | 8 | 15 | +4 | 19 |
| 1669 | *Aug.* | 3 | 19 | 13 | ♌ | 21 | 48 | 36 | 1 | 29 | 27 | 9 | ♒ | 21 | 53 | 19 | +4 | 43 |
| 1670 | *Aug.* | 16 | 11 | 16 | ♍ | 3 | 48 | 12 | 2 | 12 | 4 | 34 | ♓ | 3 | 52 | 54 | +4 | 42 |
| 1671 | *Aug* | 29 | 8 | 58 | ♍ | 16 | 5 | 49 | 2 | 24 | 42 | 30 | ♓ | 16 | 9 | 37 | +3 | 48 |
| 1672 | *Sept.* | 10 | 12 | 6 | ♍ | 28 | 41 | 47 | 3 | 7 | 20 | 51 | ♓ | 28 | 45 | 12 | +3 | 25 |
| 1673 | *Sept.* | 23 | 20 | 46 | ♎ | 11 | 37 | 11 | 3 | 19 | 59 | 41 | ♈ | 11 | 40 | 45 | +3 | 34 |
| 1674 | *Oct.* | 7 | 11 | 27 | ♎ | 24 | 53 | 10 | 4 | 2 | 38 | 58 | ♈ | 24 | 56 | 21 | +3 | 11 |
| 1675 | *Oct.* | 21 | 7 | 21 | ♏ | 8 | 28 | 17 | 4 | 15 | 18 | 44 | ♉ | 8 | 30 | 50 | +2 | 33 |
| 1676 | *Nov.* | 3 | 7 | 46 | ♏ | 22 | 20 | 20 | 4 | 27 | 58 | 54 | ♉ | 22 | 21 | 51 | +1 | 31 |
| 1677 | *Nov.* | 17 | 11 | 27 | ♐ | 6 | 25 | 25 | 5 | 10 | 39 | 18 | ♊ | 6 | 25 | 40 | +0 | 15 |
| 1678 | *Dec.* | 1 | 16 | 47 | ♐ | 20 | 38 | 15 | 5 | 23 | 19 | 52 | ♊ | 20 | 37 | 33 | −0 | 42 |
| 1679 | *Dec.* | 15 | 22 | 29 | ♑ | 4 | 54 | 0 | 6 | 6 | 0 | 25 | ♋ | 4 | 52 | 3 | −1 | 57 |
| 1680 | *Dec.* | 29 | 2 | 51 | ♑ | 19 | 6 | 40 | 6 | 18 | 40 | 54 | ♋ | 19 | 3 | 35 | −3 | 5 |
| 1682 | *Jan.* | 12 | 4 | 1 | ♒ | 3 | 9 | 45 | 7 | 1 | 21 | 8 | ♌ | 3 | 6 | 45 | −3 | 0 |
| 1683 | *Jan.* | 26 | 1 | 28 | ♒ | 17 | 0 | 30 | 7 | 14 | 1 | 0 | ♌ | 16 | 57 | 8 | −3 | 22 |
| 1684 | *Feb.* | 8 | 17 | 58 | ♓ | 0 | 34 | 35 | 7 | 26 | 40 | 28 | ♍ | 0 | 31 | 14 | −3 | 21 |
| 1685 | *Feb.* | 21 | 5 | 15 | ♓ | 13 | 50 | 30 | 8 | 9 | 20 | 0 | ♍ | 13 | 46 | 49 | −3 | 41 |
| 1686 | *Mart.* | 6 | 10 | 42 | ♓ | 26 | 46 | 20 | 8 | 21 | 58 | 4 | ♍ | 26 | 42 | 52 | −3 | 28 |
| 1687 | *Mart.* | 19 | 11 | 12 | ♈ | 9 | 24 | 20 | 9 | 4 | 36 | 11 | ♎ | 9 | 19 | 26 | −4 | 54 |
| 1688 | *Mart.* | 31 | 6 | 14 | ♈ | 21 | 43 | 20 | 9 | 17 | 14 | 0 | ♎ | 21 | 37 | 28 | −5 | 52 |

# SERIES OPPOSITIONVM SOLIS ET SATVRNI NOSTRA ÆTATE FACTARVM CVM COMPVTO PRÆCEDENTE COLLATA.

| *Oppositionum Tempora æquata* Londini. | | | *Locus Solis verus.* | | | | *Anom. med. Saturni.* | | | | *Saturnus Heliocentricus comp.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D. | H. | ′ | ☉ | ° | ′ | ″ | ♄ | ° | ′ | ″ | | ° | ′ | ″ | ′ | ″ |
| 1689 *Apr.* | 12 | 20 | 48 | ♉ | 3 | 46 | 20 | 9 | 29 | 51 | 12 | ♍ | 3 | 38 | 43 | −7 | 37 |
| 1690 *Apr.* | 25 | 6 | 36 | ♉ | 15 | 33 | 15 | 10 | 12 | 28 | 5 | ♍ | 15 | 25 | 16 | −7 | 59 |
| 1691 *Maii* | 7 | 13 | 15 | ♉ | 27 | 8 | 45 | 10 | 25 | 4 | 45 | ♍ | 26 | 59 | 56 | −8 | 49 |
| 1692 *Maii* | 18 | 17 | 16 | ♊ | 8 | 34 | 50 | 11 | 7 | 41 | 11 | ♐ | 8 | 25 | 33 | −9 | 17 |
| 1693 *Maii* | 30 | 19 | 32 | ♊ | 19 | 54 | 30 | 11 | 20 | 17 | 28 | ♐ | 19 | 45 | 11 | −9 | 19 |
| 1694 *Jun.* | 11 | 21 | 8 | ♋ | 1 | 11 | 10 | 0 | 2 | 53 | 40 | ♑ | 1 | 2 | 10 | −9 | 0 |
| 1695 *Jun.* | 23 | 23 | 25 | ♋ | 12 | 29 | 0 | 0 | 15 | 30 | 0 | ♑ | 12 | 19 | 49 | −9 | 11 |
| 1696 *Jul.* | 5 | 3 | 17 | ♋ | 23 | 51 | 0 | 0 | 28 | 6 | 22 | ♑ | 23 | 41 | 16 | −9 | 44 |
| 1697 *Jul.* | 17 | 9 | 21 | ♌ | 5 | 19 | 30 | 1 | 10 | 42 | 58 | ♒ | 5 | 9 | 55 | −9 | 35 |
| 1698 *Jul.* | 29 | 18 | 48 | ♌ | 16 | 58 | 20 | 1 | 23 | 19 | 52 | ♒ | 16 | 48 | 55 | −9 | 25 |
| 1699 *Aug.* | 11 | 8 | 28 | ♌ | 28 | 50 | 30 | 2 | 5 | 57 | 4 | ♒ | 28 | 41 | 5 | −9 | 25 |
| 1700 *Aug.* | 23 | 2 | 52 | ♍ | 10 | 58 | 0 | 2 | 18 | 34 | 45 | ♓ | 10 | 49 | 16 | −8 | 44 |
| 1701 *Sept.* | 5 | 2 | 41 | ♍ | 23 | 23 | 30 | 3 | 1 | 12 | 57 | ♓ | 23 | 15 | 30 | −8 | 0 |
| 1702 *Sept.* | 18 | 8 | 6 | ♎ | 6 | 8 | 4 | 3 | 13 | 51 | 22 | ♈ | 6 | 1 | 12 | −6 | 52 |
| 1703 *Oct.* | 1 | 18 | 59 | ♎ | 19 | 12 | 0 | 3 | 26 | 30 | 24 | ♈ | 19 | 7 | 4 | −4 | 56 |
| 1704 *Oct.* | 14 | 12 | 1 | ♏ | 2 | 37 | 0 | 4 | 9 | 9 | 53 | ♉ | 2 | 32 | 33 | −4 | 27 |
| 1705 *Oct.* | 28 | 9 | 9 | ♏ | 16 | 18 | 30 | 4 | 21 | 49 | 45 | ♉ | 16 | 15 | 48 | −2 | 42 |
| 1706 *Nov.* | 11 | 10 | 2 | ♐ | 0 | 14 | 15 | 5 | 4 | 29 | 55 | ♊ | 0 | 13 | 48 | −0 | 27 |
| 1707 *Nov.* | 25 | 13 | 42 | ♐ | 14 | 21 | 30 | 5 | 17 | 10 | 21 | ♊ | 14 | 22 | 18 | +0 | 48 |
| 1708 *Dec.* | 8 | 18 | 20 | ♐ | 28 | 33 | 45 | 5 | 29 | 50 | 51 | ♊ | 28 | 36 | 8 | +2 | 23 |
| 1709 *Dec.* | 22 | 23 | 2 | ♑ | 12 | 47 | 20 | 6 | 12 | 31 | 20 | ♋ | 12 | 49 | 44 | +2 | 24 |
| 1711 *Jan.* | 6 | 1 | 0 | ♑ | 26 | 53 | 20 | 6 | 25 | 11 | 36 | ♋ | 26 | 57 | 29 | +4 | 9 |
| 1712 *Jan.* | 20 | 0 | 18 | ♒ | 10 | 50 | 25 | 7 | 7 | 51 | 37 | ♌ | 10 | 54 | 36 | +4 | 11 |
| 1713 *Feb.* | 1 | 19 | 0 | ♒ | 24 | 32 | 10 | 7 | 20 | 31 | 18 | ♌ | 24 | 36 | 57 | +4 | 47 |
| 1714 *Feb.* | 15 | 8 | 15 | ♓ | 7 | 55 | 35 | 8 | 3 | 10 | 29 | ♍ | 8 | 1 | 40 | +6 | 5 |
| 1715 *Feb.* | 28 | 16 | 32 | ♓ | 21 | 1 | 10 | 8 | 15 | 49 | 18 | ♍ | 21 | 7 | 20 | +6 | 10 |
| 1716 *Mart.* | 12 | 19 | 6 | ♈ | 3 | 47 | 0 | 8 | 28 | 27 | 36 | ♎ | 3 | 53 | 15 | +6 | 15 |
| 1717 *Mart.* | 25 | 16 | 0 | ♈ | 16 | 13 | 15 | 9 | 11 | 5 | 27 | ♎ | 16 | 20 | 6 | +6 | 51 |
| 1718 *Apr.* | 7 | 8 | 26 | ♈ | 28 | 23 | 15 | 9 | 23 | 42 | 55 | ♎ | 28 | 29 | 14 | +5 | 59 |
| 1719 *Apr.* | 19 | 20 | 20 | ♉ | 10 | 17 | 20 | 10 | 6 | 20 | 0 | ♍ | 10 | 22 | 36 | +5 | 16 |

# *MONITUM.*

HAbes itaque, Curioſe Aſtrophile, in his Oppoſitionum *Solis* & Planetarum ſuperiorum Seriebus, quaſi Synopſin motuum per ſexaginta Annos continuos, prout in Cœlo viſi ſunt, deſcriptorum, quas ex obſervationibus quæ ſuppetebant accuratioribus, non minore cum fide quam diligentia concinnavimus. Vides etiam Tabulas has noſtras examini ſat rigido ſubjectas: Nec Te moveat quod in *Jove* ſemel ad octo minuta aſſurgat error; in *Saturno* vero aliquando ad decem: Haud aliter enim fieri potuit, abſq; aſſumptis novis Hypotheſibus nondum ſatis perſpectis, & ad Cœlorum Lapidem Lydium probatis. *Jupiter* autem ab Oppoſitione Anni 1677 ad eam Anni 1689 revolutus, juxta indubitatas obſervationes tardior inventus eſt, quam in præcedente vel ſubſequente revolutione, totis duodecim minutis primis. *Saturni* etiam periodus, intra Annos 1668 & 1698 facta, Hebdomade fere totâ brevior erat mediâ ejus revolutione; totidemq; fere Diebus mediâ longior erat altera periodus ab Anno 1689 ad Annum 1719 peracta; ita ut inter durationes earum intercedat differentia pluſquam tredecim dierum. An vero hoc in ſubſequentibus eventurum ſit Poſteris curæ eſto.

Hæc autem oriri a mutuis maximorum Planetarum in ſe invicem actionibus, *Solis* vires centripetas interturbantibus, pluſquam probabile eſt: Nec levi argumento indicatur, quod cum Anno 1683 facta fuerit Conjunctio *Jovis* & *Saturni*, in iis Orbium partibus ubi, ob ſitum Apſidum, proxime accedunt ad invicem Planetæ, junctæ eorum Vires *Saturnum* verſus *Solem*, e contra vero *Jovem* à *Sole* tum maxime urgebant; quapropter *Jupiter*, auctâ velocitate propriâ, ac minutâ vi *Solis* centripetâ, in majorem excurrere debuit Orbem diuturniori periodo abſolvendum: Interea dum *Saturnus*, minutâ velocitate propriâ & majori vi verſus *Solem* preſſus, in minorem Orbem coactus eſſet, ac proinde breviori Tempore revolutus. Si hæc eadem repetitis vicibus Conjunctionem *Jovis* & *Saturni* in *Leone* conſequantur, merito ſperandum eſt errores quos in horum motibus deprehendimus, utpote a trium tantum centrorum efficaciâ oriundi, ope *Geometriæ Neutonianæ* tandem tolli poſſe. Sin minus, ac ſi aliquando evenerint periodi longiores ubi nunc breviſſimi, & è contra, petenda erit cauſa aliqua extrinſecus agens, de qua nondum conſtat. Sed de hac re plura alibi.

TABULA-

# TABULARUM
# *ASTRONOMICARUM*

PARS ALTERA

# MOTUS PLANETARUM
## SECUNDARIORUM;
## SIVE
# SATELLITUM
## *JOVIS & SATURNI*

EXHIBENS.

## EPOCHÆ MEDIORUM MOTUUM QUATUOR SATELLITUM JOVIS.

| Annis Julianis ineuntibus. | Primus ab Æquinoct. | | | | Secundus ab Æquinoct. | | | | Tertius ab Æquinoct. | | | | Quartus ab Æquinoct. | | | | Apsis Quarti ♒ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ | o | ′ |
| 1661 | 5 | 21 | 45 | 0 | 11 | 14 | 35 | 0 | 11 | 12 | 8 | 20 | 8 | 24 | 13 | 0 | 4 | 24 |
| 62 | 9 | 15 | 13 | 40 | 8 | 26 | 23 | 0 | 11 | 18 | 4 | 29 | 7 | 7 | 40 | 20 | 5 | 0 |
| 63 | 1 | 8 | 42 | 20 | 6 | 8 | 11 | 0 | 11 | 24 | 0 | 38 | 5 | 21 | 7 | 40 | 5 | 36 |
| 64 | 5 | 2 | 11 | 0 | 3 | 19 | 59 | 0 | 11 | 29 | 56 | 48 | 4 | 4 | 35 | 0 | 6 | 12 |
| 1665 | 3 | 19 | 9 | 0 | 4 | 13 | 9 | 30 | 1 | 26 | 12 | 0 | 3 | 9 | 36 | 36 | 6 | 48 |
| 1666 | 7 | 12 | 37 | 40 | 1 | 24 | 57 | 30 | 2 | 2 | 8 | 9 | 1 | 23 | 3 | 56 | 7 | 24 |
| 67 | 11 | 6 | 6 | 20 | 11 | 6 | 45 | 30 | 2 | 8 | 4 | 18 | 0 | 6 | 31 | 16 | 8 | 0 |
| 68 | 2 | 29 | 35 | 0 | 8 | 18 | 33 | 30 | 2 | 14 | 0 | 28 | 10 | 19 | 58 | 36 | 8 | 36 |
| 69 | 1 | 16 | 33 | 0 | 9 | 11 | 44 | 0 | 4 | 10 | 15 | 40 | 9 | 25 | 0 | 12 | 9 | 12 |
| 1670 | 5 | 10 | 1 | 40 | 6 | 23 | 32 | 0 | 4 | 16 | 11 | 49 | 8 | 8 | 27 | 32 | 9 | 48 |
| 1671 | 9 | 3 | 30 | 20 | 4 | 5 | 20 | 0 | 4 | 22 | 7 | 58 | 6 | 21 | 54 | 52 | 10 | 24 |
| 72 | 0 | 26 | 59 | 0 | 1 | 17 | 8 | 0 | 4 | 28 | 4 | 8 | 5 | 5 | 22 | 12 | 11 | 0 |
| 73 | 11 | 13 | 57 | 0 | 2 | 10 | 18 | 30 | 6 | 24 | 19 | 20 | 4 | 10 | 23 | 48 | 11 | 36 |
| 74 | 3 | 7 | 25 | 40 | 11 | 22 | 6 | 30 | 7 | 0 | 15 | 29 | 2 | 23 | 51 | 8 | 12 | 12 |
| 1675 | 7 | 0 | 54 | 20 | 9 | 3 | 54 | 30 | 7 | 6 | 11 | 38 | 1 | 7 | 18 | 28 | 12 | 48 |
| 1676 | 10 | 24 | 23 | 0 | 6 | 15 | 42 | 30 | 7 | 12 | 7 | 48 | 11 | 20 | 45 | 48 | 13 | 24 |
| 77 | 9 | 11 | 21 | 0 | 7 | 8 | 53 | 0 | 9 | 8 | 23 | 0 | 10 | 25 | 47 | 24 | 14 | 0 |
| 78 | 1 | 4 | 49 | 40 | 4 | 20 | 41 | 0 | 9 | 14 | 19 | 9 | 9 | 9 | 14 | 44 | 14 | 36 |
| 79 | 4 | 28 | 18 | 20 | 2 | 2 | 29 | 0 | 9 | 20 | 15 | 18 | 7 | 22 | 42 | 4 | 15 | 12 |
| 1680 | 8 | 21 | 47 | 0 | 11 | 14 | 17 | 0 | 9 | 26 | 11 | 28 | 6 | 6 | 9 | 24 | 15 | 48 |
| 1681 | 7 | 8 | 45 | 0 | 0 | 7 | 27 | 30 | 11 | 22 | 26 | 40 | 5 | 11 | 11 | 0 | 16 | 24 |
| 82 | 11 | 2 | 13 | 40 | 9 | 19 | 15 | 30 | 11 | 28 | 22 | 49 | 3 | 24 | 38 | 20 | 17 | 0 |
| 83 | 2 | 25 | 42 | 20 | 7 | 1 | 3 | 30 | 0 | 4 | 18 | 58 | 2 | 8 | 5 | 40 | 17 | 36 |
| 84 | 6 | 19 | 11 | 0 | 4 | 12 | 51 | 30 | 0 | 10 | 15 | 8 | 0 | 21 | 33 | 0 | 18 | 12 |
| 1685 | 5 | 6 | 9 | 0 | 5 | 6 | 2 | 0 | 2 | 6 | 30 | 20 | 11 | 26 | 34 | 36 | 18 | 48 |
| 1686 | 8 | 29 | 37 | 40 | 2 | 17 | 50 | 0 | 2 | 12 | 26 | 29 | 10 | 10 | 1 | 56 | 19 | 24 |
| 87 | 0 | 23 | 6 | 20 | 11 | 29 | 38 | 0 | 2 | 18 | 22 | 38 | 8 | 23 | 29 | 16 | 20 | 0 |
| 88 | 4 | 16 | 35 | 0 | 9 | 11 | 26 | 0 | 2 | 24 | 18 | 48 | 7 | 6 | 56 | 36 | 20 | 36 |
| 89 | 3 | 3 | 33 | 0 | 10 | 4 | 36 | 30 | 4 | 20 | 34 | 0 | 6 | 11 | 58 | 12 | 21 | 12 |
| 1690 | 6 | 27 | 1 | 40 | 7 | 16 | 24 | 30 | 4 | 26 | 30 | 9 | 4 | 25 | 25 | 32 | 21 | 48 |
| 1691 | 10 | 20 | 30 | 20 | 4 | 28 | 12 | 30 | 5 | 2 | 26 | 18 | 3 | 8 | 52 | 52 | 22 | 24 |
| 92 | 2 | 13 | 59 | 0 | 2 | 10 | 0 | 30 | 5 | 8 | 22 | 28 | 1 | 22 | 20 | 12 | 23 | 0 |
| 93 | 1 | 0 | 57 | 0 | 3 | 3 | 11 | 0 | 7 | 4 | 37 | 40 | 0 | 27 | 21 | 48 | 23 | 36 |
| 94 | 4 | 24 | 25 | 40 | 0 | 14 | 59 | 0 | 7 | 10 | 33 | 49 | 11 | 10 | 49 | 8 | 24 | 12 |
| 1695 | 8 | 17 | 54 | 20 | 9 | 26 | 47 | 0 | 7 | 16 | 29 | 58 | 9 | 24 | 16 | 28 | 24 | 48 |

## EPOCHÆ MEDIORUM MOTUUM SATELLITUM JOVIS.

| Annis Juli-anis ineun-tibus. | Primus ab Æquinoct. | | | | Secundus ab Æquinoct. | | | | Tertius ab Æquinoct. | | | | Quartus ab Æquinoct. | | | | Apsis Quarti ♈ | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | s | o | ′ | ″ | s | o | ′ | ″ | s | o | ′ | ″ | s | o | ′ | ″ | s | o | ′ |
| 1696 | 0 | 11 | 23 | 0 | 7 | 8 | 35 | 0 | 7 | 22 | 26 | 8 | 8 | 7 | 43 | 48 | 25 | 24 | |
| 97 | 10 | 28 | 21 | 0 | 8 | 1 | 45 | 30 | 9 | 18 | 41 | 20 | 7 | 12 | 45 | 24 | 26 | 0 | |
| 98 | 2 | 21 | 49 | 40 | 5 | 13 | 33 | 30 | 9 | 24 | 37 | 29 | 5 | 26 | 12 | 44 | 26 | 36 | |
| 99 | 6 | 15 | 18 | 20 | 2 | 25 | 21 | 30 | 10 | 0 | 33 | 38 | 4 | 9 | 40 | 4 | 27 | 12 | |
| 1700 | 10 | 8 | 47 | 0 | 0 | 7 | 9 | 30 | 10 | 6 | 29 | 48 | 2 | 23 | 7 | 24 | 27 | 48 | |
| 1701 | 8 | 25 | 45 | 0 | 1 | 0 | 20 | 0 | 0 | 2 | 45 | 0 | 1 | 28 | 9 | 0 | 28 | 24 | |
| 2 | 0 | 19 | 13 | 40 | 10 | 12 | 8 | 0 | 0 | 8 | 41 | 9 | 0 | 11 | 36 | 20 | 29 | 0 | |
| 3 | 4 | 12 | 42 | 20 | 7 | 23 | 56 | 0 | 0 | 14 | 37 | 18 | 10 | 25 | 3 | 40 | 29 | 36 | |
| 4 | 8 | 6 | 11 | 0 | 5 | 5 | 44 | 0 | 0 | 20 | 33 | 28 | 9 | 8 | 31 | 0 | ♓ | 0 | 12 |
| 1705 | 6 | 23 | 9 | 0 | 5 | 28 | 54 | 30 | 2 | 16 | 48 | 40 | 8 | 13 | 32 | 36 | 0 | 48 | |
| 1706 | 10 | 16 | 37 | 40 | 3 | 10 | 42 | 30 | 2 | 22 | 44 | 49 | 6 | 26 | 59 | 56 | 1 | 24 | |
| 7 | 2 | 10 | 6 | 20 | 0 | 22 | 30 | 30 | 2 | 28 | 40 | 58 | 5 | 10 | 27 | 16 | 2 | 0 | |
| 8 | 6 | 3 | 35 | 0 | 10 | 4 | 18 | 30 | 3 | 4 | 37 | 8 | 3 | 23 | 54 | 36 | 2 | 36 | |
| 9 | 4 | 20 | 33 | 0 | 10 | 27 | 29 | 0 | 5 | 0 | 52 | 20 | 2 | 28 | 56 | 12 | 3 | 12 | |
| 1710 | 8 | 14 | 1 | 40 | 8 | 9 | 17 | 0 | 5 | 6 | 48 | 29 | 1 | 12 | 23 | 32 | 3 | 48 | |
| 1711 | 0 | 7 | 30 | 20 | 5 | 21 | 5 | 0 | 5 | 12 | 44 | 38 | 11 | 25 | 50 | 52 | 4 | 24 | |
| 12 | 4 | 0 | 59 | 0 | 3 | 2 | 53 | 0 | 5 | 18 | 40 | 48 | 10 | 9 | 18 | 12 | 5 | 0 | |
| 13 | 2 | 17 | 57 | 0 | 3 | 26 | 3 | 30 | 7 | 14 | 56 | 0 | 9 | 14 | 19 | 48 | 5 | 36 | |
| 14 | 6 | 11 | 25 | 40 | 1 | 7 | 51 | 30 | 7 | 20 | 52 | 9 | 7 | 27 | 47 | 8 | 6 | 12 | |
| 1715 | 10 | 4 | 54 | 20 | 10 | 19 | 39 | 30 | 7 | 26 | 48 | 18 | 6 | 11 | 14 | 28 | 6 | 48 | |
| 1716 | 1 | 28 | 23 | 0 | 8 | 1 | 27 | 30 | 8 | 2 | 44 | 28 | 4 | 24 | 41 | 48 | 7 | 24 | |
| 17 | 0 | 15 | 21 | 0 | 8 | 24 | 38 | 0 | 9 | 28 | 59 | 40 | 3 | 29 | 43 | 24 | 8 | 0 | |
| 18 | 4 | 8 | 49 | 40 | 6 | 6 | 26 | 0 | 10 | 4 | 55 | 49 | 2 | 13 | 10 | 44 | 8 | 36 | |
| 19 | 8 | 2 | 18 | 20 | 3 | 18 | 14 | 0 | 10 | 10 | 51 | 58 | 0 | 26 | 38 | 4 | 9 | 12 | |
| 1720 | 11 | 25 | 47 | 0 | 1 | 0 | 2 | 0 | 10 | 16 | 48 | 8 | 11 | 10 | 5 | 24 | 9 | 48 | |
| 1721 | 10 | 12 | 45 | 0 | 1 | 23 | 12 | 30 | 0 | 13 | 3 | 20 | 10 | 15 | 7 | 0 | 10 | 24 | |
| 22 | 2 | 6 | 13 | 40 | 11 | 5 | 0 | 30 | 0 | 18 | 59 | 29 | 8 | 28 | 34 | 20 | 11 | 0 | |
| 23 | 5 | 29 | 42 | 20 | 8 | 16 | 48 | 30 | 0 | 24 | 55 | 38 | 7 | 12 | 1 | 40 | 11 | 36 | |
| 24 | 9 | 23 | 11 | 0 | 5 | 28 | 36 | 30 | 1 | 0 | 51 | 48 | 5 | 25 | 29 | 0 | 12 | 12 | |
| 1725 | 8 | 10 | 9 | 0 | 6 | 21 | 47 | 0 | 2 | 27 | 7 | 0 | 5 | 0 | 30 | 36 | 12 | 48 | |
| 1726 | 0 | 3 | 37 | 40 | 4 | 3 | 35 | 0 | 3 | 3 | 3 | 9 | 3 | 13 | 57 | 56 | 13 | 24 | |
| 27 | 3 | 27 | 6 | 20 | 1 | 15 | 23 | 0 | 3 | 8 | 59 | 18 | 1 | 27 | 25 | 16 | 14 | 0 | |
| 28 | 7 | 20 | 35 | 0 | 10 | 27 | 11 | 0 | 3 | 14 | 55 | 28 | 0 | 10 | 52 | 36 | 14 | 36 | |
| 29 | 6 | 7 | 33 | 0 | 11 | 20 | 21 | 30 | 5 | 11 | 10 | 40 | 11 | 15 | 54 | 12 | 15 | 12 | |
| 1730 | 10 | 1 | 1 | 40 | 9 | 2 | 9 | 30 | 5 | 17 | 6 | 49 | 9 | 29 | 21 | 32 | 15 | 48 | |

## EPOCHÆ MEDIORUM MOTUUM SATELLITUM JOVIS.

| Annis Juli-anis ineun tibus. | Primus ab Æquinoct. | | | | Secundus ab Æquinoct. | | | | Tertius ab Æquinoct. | | | | Quartus ab Æquinoct. | | | | Aphs Quarti ♓ | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ |
| 1731 | 1 | 24 | 30 | 20 | 6 | 13 | 57 | 30 | 5 | 23 | 2 | 58 | 8 | 12 | 48 | 52 | 16 | 24 | |
| 32 | 5 | 17 | 59 | 0 | 3. | 25 | 45 | 30 | 5 | 28 | 59 | 8 | 6 | 26 | 16 | 12 | 17 | 0 | |
| 33 | 4 | 4 | 57 | 0 | 4 | 18 | 56 | 0 | 7 | 25 | 14 | 20 | 6 | 1 | 17 | 48 | 17 | 36 | |
| 34 | 7 | 28 | 25 | 40 | 2 | 0 | 44 | 0 | 8 | 1 | 10 | 29 | 4 | 14 | 45 | 8 | 18 | 12 | |
| 1735 | 11 | 21 | 54 | 20 | 11 | 12 | 32 | 0 | 8 | 7 | 6 | 38 | 2 | 28 | 12 | 28 | 18 | 48 | |
| 1736 | 3 | 15 | 23 | 0 | 8 | 24 | 20 | 0 | 8 | 13 | 2 | 48 | 1 | 11 | 39 | 48 | 19 | 24 | |
| 37 | 2 | 2 | 21 | 0 | 9 | 17 | 30 | 30 | 10 | 9 | 18 | 0 | 0 | 16 | 41 | 24 | 20 | 0 | |
| 38 | 5 | 25 | 49 | 40 | 6 | 29 | 18 | 30 | 10 | 15 | 14 | 9 | 11 | 0 | 8 | 44 | 20 | 36 | |
| 39 | 9 | 19 | 18 | 20 | 4 | 11 | 6 | 30 | 10 | 21 | 10 | 18 | 9 | 13 | 36 | 4 | 21 | 12 | |
| 1740 | 1 | 12 | 47 | 0 | 1 | 22 | 54 | 30 | 10 | 27 | 6 | 28 | 7 | 27 | 3 | 24 | 21 | 48 | |
| 1741 | 11 | 29 | 45 | 0 | 2 | 16 | 5 | 0 | 0 | 23 | 21 | 40 | 7 | 2 | 5 | 0 | 22 | 24 | |
| 42 | 3 | 23 | 13 | 40 | 11 | 27 | 53 | 0 | 0 | 29 | 17 | 49 | 5 | 15 | 32 | 20 | 23 | 0 | |
| 43 | 7 | 16 | 42 | 20 | 9 | 9 | 41 | 0 | 1 | 5 | 13 | 58 | 3 | 28 | 59 | 40 | 23 | 36 | |
| 44 | 11 | 10 | 11 | 0 | 6 | 21 | 29 | 0 | 1 | 11 | 10 | 8 | 2 | 12 | 27 | 0 | 24 | 12 | |
| 1745 | 9 | 27 | 9 | 0 | 7 | 14 | 39 | 30 | 3 | 7 | 25 | 20 | 1 | 17 | 28 | 36 | 24 | 48 | |
| 1746 | 1 | 20 | 37 | 40 | 4 | 26 | 27 | 30 | 3 | 13 | 21 | 29 | 0 | 0 | 55 | 56 | 25 | 24 | |
| 47 | 5 | 14 | 6 | 20 | 2 | 8 | 15 | 30 | 3 | 19 | 17 | 38 | 10 | 14 | 23 | 16 | 26 | 0 | |
| 48 | 9 | 7 | 35 | 0 | 11 | 20 | 3 | 30 | 3 | 25 | 13 | 48 | 8 | 27 | 50 | 36 | 26 | 36 | |
| 49 | 7 | 24 | 33 | 0 | 0 | 13 | 14 | 0 | 5 | 21 | 29 | 0 | 8 | 2 | 52 | 12 | 27 | 12 | |
| 1750 | 11 | 18 | 1 | 40 | 9 | 25 | 2 | 0 | 5 | 27 | 25 | 9 | 6 | 16 | 19 | 32 | 27 | 48 | |
| 1751 | 3 | 11 | 30 | 20 | 7 | 6 | 50 | 0 | 6 | 3 | 21 | 18 | 4 | 29 | 46 | 52 | 28 | 24 | |
| 52 | 7 | 4 | 59 | 0 | 4 | 18 | 38 | 0 | 6 | 9 | 17 | 28 | 3 | 13 | 14 | 12 | 29 | 0 | |
| 53 | 5 | 21 | 57 | 0 | 5 | 11 | 48 | 30 | 8 | 5 | 32 | 40 | 2 | 18 | 15 | 48 | 29 | 36 | |
| 54 | 9 | 15 | 25 | 40 | 2 | 23 | 36 | 30 | 8 | 11 | 28 | 49 | 1 | 1 | 43 | 8 | ♈ | 0 | 12 |
| 1755 | 1 | 8 | 54 | 20 | 0 | 5 | 24 | 30 | 8 | 17 | 24 | 58 | 11 | 15 | 10 | 28 | 0 | 48 | |
| 1756 | 5 | 2 | 23 | 0 | 9 | 17 | 12 | 30 | 8 | 23 | 21 | 8 | 9 | 28 | 37 | 48 | 1 | 24 | |
| 57 | 3 | 19 | 21 | 0 | 10 | 10 | 23 | 0 | 10 | 19 | 36 | 20 | 9 | 3 | 39 | 24 | 2 | 0 | |
| 58 | 7 | 12 | 49 | 40 | 7 | 22 | 11 | 0 | 10 | 25 | 32 | 29 | 7 | 17 | 6 | 44 | 2 | 36 | |
| 59 | 11 | 6 | 18 | 20 | 5 | 3 | 59 | 0 | 11 | 1 | 28 | 38 | 6 | 0 | 34 | 4 | 3 | 12 | |
| 1760 | 2 | 29 | 47 | 0 | 2 | 15 | 47 | 0 | 11 | 7 | 24 | 48 | 4 | 14 | 1 | 24 | 3 | 48 | |
| 1761 | 1 | 16 | 45 | 0 | 3 | 8 | 57 | 30 | 1 | 3 | 40 | 0 | 3 | 19 | 3 | 0 | 4 | 24 | |
| 62 | 5 | 10 | 13 | 40 | 0 | 20 | 45 | 30 | 1 | 9 | 36 | 9 | 2 | 2 | 30 | 20 | 5 | 0 | |
| 63 | 9 | 3 | 42 | 20 | 10 | 2 | 33 | 30 | 1 | 15 | 32 | 18 | 0 | 15 | 57 | 40 | 5 | 36 | |
| 64 | 0 | 27 | 11 | 0 | 7 | 14 | 21 | 30 | 1 | 21 | 28 | 28 | 10 | 29 | 25 | 0 | 6 | 12 | |
| 1765 | 11 | 14 | 9 | 0 | 8 | 7 | 32 | 0 | 3 | 17 | 43 | 40 | 10 | 4 | 26 | 36 | 6 | 48 | |

## MEDII MOTVS SATELLITVM IOVIS AD DIES MENSIS

# IANUARII.

| Die Mensis. | Primi | | | | Secundi | | | | Tertii | | | | Quarti | | | | Motus Apsis Quarti. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S | ○ | ′ | ″ | S | ○ | ′ | ″ | S | ○ | ′ | ″ | S | ○ | ′ | ″ | Min. |
| 1 | 6 | 23 | 29 | 20 | 3 | 11 | 22 | 29 | 1 | 20 | 19 | 3 | 0 | 21 | 34 | 16 | |
| 2 | 1 | 16 | 58 | 40 | 6 | 22 | 44 | 59 | 3 | 10 | 38 | 7 | 1 | 13 | 8 | 32 | |
| 3 | 8 | 10 | 28 | 1 | 10 | 4 | 7 | 28 | 5 | 0 | 57 | 10 | 2 | 4 | 42 | 48 | |
| 4 | 3 | 3 | 57 | 21 | 1 | 15 | 29 | 57 | 6 | 21 | 16 | 14 | 2 | 26 | 17 | 4 | |
| 5 | 9 | 27 | 26 | 41 | 4 | 26 | 52 | 26 | 8 | 11 | 35 | 17 | 3 | 17 | 51 | 20 | |
| 6 | 4 | 20 | 56 | 2 | 8 | 8 | 14 | 56 | 10 | 1 | 54 | 20 | 4 | 9 | 25 | 36 | |
| 7 | 11 | 14 | 25 | 22 | 11 | 19 | 37 | 25 | 11 | 22 | 13 | 24 | 5 | 0 | 59 | 52 | |
| 8 | 6 | 7 | 54 | 42 | 3 | 0 | 59 | 54 | 1 | 12 | 32 | 28 | 5 | 22 | 34 | 8 | |
| 9 | 1 | 1 | 24 | 3 | 6 | 12 | 22 | 23 | 3 | 2 | 51 | 31 | 6 | 14 | 8 | 24 | |
| 10 | 7 | 24 | 53 | 23 | 9 | 23 | 44 | 53 | 4 | 23 | 10 | 34 | 7 | 5 | 42 | 40 | 1 |
| 11 | 2 | 18 | 22 | 43 | 1 | 5 | 7 | 22 | 6 | 13 | 29 | 38 | 7 | 27 | 16 | 56 | |
| 12 | 9 | 11 | 52 | 4 | 4 | 16 | 29 | 51 | 8 | 3 | 48 | 41 | 8 | 18 | 51 | 12 | |
| 13 | 4 | 5 | 21 | 24 | 7 | 27 | 52 | 21 | 9 | 24 | 7 | 45 | 9 | 10 | 25 | 28 | |
| 14 | 10 | 28 | 50 | 44 | 11 | 9 | 14 | 50 | 11 | 14 | 26 | 48 | 10 | 1 | 59 | 44 | |
| 15 | 5 | 22 | 20 | 5 | 2 | 20 | 37 | 19 | 1 | 4 | 45 | 52 | 10 | 23 | 34 | 0 | |
| 16 | 0 | 15 | 49 | 25 | 6 | 1 | 59 | 48 | 2 | 25 | 4 | 55 | 11 | 15 | 8 | 16 | |
| 17 | 7 | 9 | 18 | 45 | 9 | 13 | 22 | 17 | 4 | 15 | 23 | 59 | 0 | 6 | 42 | 32 | |
| 18 | 2 | 2 | 48 | 6 | 0 | 24 | 44 | 47 | 6 | 5 | 43 | 2 | 0 | 28 | 16 | 48 | |
| 19 | 8 | 26 | 17 | 26 | 4 | 6 | 7 | 16 | 7 | 26 | 2 | 6 | 1 | 19 | 51 | 4 | |
| 20 | 3 | 19 | 46 | 46 | 7 | 17 | 29 | 45 | 9 | 16 | 21 | 9 | 2 | 11 | 25 | 20 | |
| 21 | 10 | 13 | 16 | 7 | 10 | 28 | 52 | 14 | 11 | 6 | 40 | 12 | 3 | 2 | 59 | 36 | 2 |
| 22 | 5 | 6 | 45 | 27 | 2 | 10 | 14 | 44 | 0 | 26 | 59 | 16 | 3 | 24 | 33 | 52 | |
| 23 | 0 | 0 | 14 | 47 | 5 | 21 | 37 | 13 | 2 | 17 | 18 | 19 | 4 | 16 | 8 | 8 | |
| 24 | 6 | 23 | 44 | 8 | 9 | 2 | 59 | 42 | 4 | 7 | 37 | 23 | 5 | 7 | 42 | 24 | |
| 25 | 1 | 17 | 13 | 28 | 0 | 14 | 22 | 12 | 5 | 27 | 56 | 26 | 5 | 29 | 16 | 40 | |
| 26 | 8 | 10 | 42 | 48 | 3 | 25 | 44 | 41 | 7 | 18 | 15 | 29 | 6 | 20 | 50 | 56 | |
| 27 | 3 | 4 | 12 | 9 | 7 | 7 | 7 | 10 | 9 | 8 | 34 | 33 | 7 | 12 | 25 | 12 | |
| 28 | 9 | 27 | 41 | 29 | 10 | 18 | 29 | 39 | 10 | 28 | 53 | 36 | 8 | 3 | 59 | 28 | |
| 29 | 4 | 21 | 10 | 49 | 1 | 29 | 52 | 9 | 0 | 19 | 12 | 40 | 8 | 25 | 33 | 44 | |
| 30 | 11 | 14 | 40 | 10 | 5 | 11 | 14 | 38 | 2 | 9 | 31 | 43 | 9 | 17 | 8 | 0 | |
| 31 | 6 | 8 | 9 | 30 | 8 | 22 | 37 | 7 | 3 | 29 | 50 | 47 | 10 | 8 | 42 | 16 | 3 |

## *MEDII MOTUS SATELLITUM JOVIS AD DIES MENSIS*

# FEBRUARII.

| *Dies Mensis.* | *Primi* | | | | *Secundi* | | | | *Tertii* | | | | *Quarti* | | | | *Motus Apsis Quarti.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *Min.* |
| 1 | 1 | 1 | 38 | 50 | 0 | 3 | 59 | 36 | 5 | 20 | 9 | 51 | 11 | 0 | 16 | 32 | |
| 2 | 7 | 25 | 8 | 11 | 3 | 15 | 22 | 6 | 7 | 10 | 28 | 54 | 11 | 21 | 50 | 48 | |
| 3 | 2 | 18 | 37 | 31 | 6 | 26 | 44 | 35 | 9 | 0 | 47 | 58 | 0 | 13 | 25 | 4 | |
| 4 | 9 | 12 | 6 | 51 | 10 | 8 | 7 | 4 | 10 | 21 | 7 | 1 | 1 | 4 | 59 | 20 | |
| 5 | 4 | 5 | 36 | 12 | 1 | 19 | 29 | 33 | 0 | 11 | 26 | 4 | 1 | 26 | 33 | 36 | |
| 6 | 10 | 29 | 5 | 32 | 5 | 0 | 52 | 3 | 2 | 1 | 45 | 8 | 2 | 18 | 7 | 52 | |
| 7 | 5 | 22 | 34 | 52 | 8 | 12 | 14 | 32 | 3 | 22 | 4 | 11 | 3 | 9 | 42 | 8 | |
| 8 | 0 | 16 | 4 | 13 | 11 | 23 | 37 | 1 | 5 | 12 | 23 | 15 | 4 | 1 | 16 | 24 | |
| 9 | 7 | 9 | 33 | 33 | 3 | 4 | 59 | 30 | 7 | 2 | 42 | 18 | 4 | 22 | 50 | 40 | |
| 10 | 2 | 3 | 2 | 53 | 6 | 16 | 22 | 0 | 8 | 23 | 1 | 21 | 5 | 14 | 24 | 56 | |
| 11 | 8 | 26 | 32 | 14 | 9 | 27 | 44 | 29 | 10 | 13 | 20 | 25 | 6 | 5 | 59 | 12 | 4 |
| 12 | 3 | 20 | 1 | 34 | 1 | 9 | 6 | 58 | 0 | 3 | 39 | 28 | 6 | 27 | 33 | 28 | |
| 13 | 10 | 13 | 30 | 54 | 4 | 20 | 29 | 27 | 1 | 23 | 58 | 32 | 7 | 19 | 7 | 44 | |
| 14 | 5 | 7 | 0 | 15 | 8 | 1 | 51 | 56 | 3 | 14 | 17 | 35 | 8 | 10 | 42 | 0 | |
| 15 | 0 | 0 | 29 | 35 | 11 | 13 | 14 | 26 | 5 | 4 | 36 | 38 | 9 | 2 | 16 | 16 | |
| 16 | 6 | 23 | 58 | 55 | 2 | 24 | 36 | 55 | 6 | 24 | 55 | 42 | 9 | 23 | 50 | 32 | |
| 17 | 1 | 17 | 28 | 16 | 6 | 5 | 59 | 24 | 8 | 15 | 14 | 45 | 10 | 15 | 24 | 48 | |
| 18 | 8 | 10 | 57 | 36 | 9 | 17 | 21 | 54 | 10 | 5 | 33 | 49 | 11 | 6 | 59 | 4 | |
| 19 | 3 | 4 | 26 | 56 | 0 | 28 | 44 | 23 | 11 | 25 | 52 | 52 | 11 | 28 | 33 | 20 | |
| 20 | 9 | 27 | 56 | 17 | 4 | 10 | 6 | 52 | 1 | 16 | 11 | 56 | 0 | 20 | 7 | 36 | |
| 21 | 4 | 21 | 25 | 37 | 7 | 21 | 29 | 22 | 3 | 6 | 30 | 59 | 1 | 11 | 41 | 52 | 5 |
| 22 | 11 | 14 | 54 | 57 | 11 | 2 | 51 | 51 | 4 | 26 | 50 | 3 | 2 | 3 | 16 | 8 | |
| 23 | 6 | 8 | 24 | 18 | 2 | 14 | 14 | 20 | 6 | 17 | 9 | 7 | 2 | 24 | 50 | 24 | |
| 24 | 1 | 1 | 53 | 38 | 5 | 25 | 36 | 49 | 8 | 7 | 28 | 10 | 3 | 16 | 24 | 40 | |
| 25 | 7 | 25 | 22 | 58 | 9 | 6 | 59 | 19 | 9 | 27 | 47 | 13 | 4 | 7 | 58 | 56 | |
| 26 | 2 | 18 | 52 | 19 | 0 | 18 | 21 | 48 | 11 | 18 | 6 | 17 | 4 | 29 | 33 | 12 | |
| 27 | 9 | 12 | 21 | 39 | 3 | 29 | 44 | 17 | 1 | 8 | 25 | 20 | 5 | 21 | 7 | 28 | |
| 28 | 4 | 5 | 50 | 59 | 7 | 11 | 6 | 46 | 2 | 28 | 44 | 24 | 6 | 12 | 41 | 44 | |

*In Anno* Biſſextili *poſt* Februarium *adde unius Diei Motum.*

## *MEDII MOTVS SATELLITVM IOVIS AD DIES MENSIS*

# MARTII.

| *Die Mensis.* | *Primi* | | | | *Secundi* | | | | *Tertii* | | | | *Quarti* | | | | *Motus Apsis Quarti.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *Min.* |
| 1 | 10 | 29 | 20 | 20 | 10 | 22 | 29 | 16 | 4 | 19 | 3 | 27 | 7 | 4 | 16 | 0 | |
| 2 | 5 | 22 | 49 | 40 | 2 | 3 | 51 | 45 | 6 | 9 | 22 | 30 | 7 | 25 | 50 | 16 | |
| 3 | 0 | 16 | 19 | 0 | 5 | 15 | 14 | 14 | 7 | 29 | 41 | 34 | 8 | 17 | 24 | 32 | |
| 4 | 7 | 9 | 48 | 21 | 8 | 26 | 36 | 44 | 9 | 20 | 0 | 37 | 9 | 8 | 58 | 48 | 6 |
| 5 | 2 | 3 | 17 | 41 | 0 | 7 | 59 | 13 | 11 | 10 | 19 | 41 | 10 | 0 | 33 | 4 | |
| 6 | 8 | 26 | 47 | 1 | 3 | 19 | 21 | 42 | 1 | 0 | 38 | 44 | 10 | 22 | 7 | 20 | |
| 7 | 3 | 20 | 16 | 22 | 7 | 0 | 44 | 12 | 2 | 20 | 57 | 47 | 11 | 13 | 41 | 36 | |
| 8 | 10 | 13 | 45 | 42 | 10 | 12 | 6 | 41 | 4 | 11 | 16 | 51 | 0 | 5 | 15 | 52 | |
| 9 | 5 | 7 | 15 | 2 | 1 | 23 | 29 | 10 | 6 | 1 | 35 | 54 | 0 | 26 | 50 | 8 | |
| 10 | 0 | 0 | 44 | 23 | 5 | 4 | 51 | 39 | 7 | 21 | 54 | 58 | 1 | 18 | 24 | 24 | |
| 11 | 6 | 24 | 13 | 43 | 8 | 16 | 14 | 8 | 9 | 12 | 14 | 1 | 2 | 9 | 58 | 40 | |
| 12 | 1 | 17 | 43 | 3 | 11 | 27 | 36 | 38 | 11 | 2 | 33 | 5 | 3 | 1 | 32 | 56 | |
| 13 | 8 | 11 | 12 | 24 | 3 | 8 | 59 | 7 | 0 | 22 | 52 | 8 | 3 | 23 | 7 | 12 | |
| 14 | 3 | 4 | 41 | 44 | 6 | 20 | 21 | 36 | 2 | 13 | 11 | 12 | 4 | 14 | 41 | 28 | 7 |
| 15 | 9 | 28 | 11 | 4 | 10 | 1 | 44 | 5 | 4 | 3 | 30 | 15 | 5 | 6 | 15 | 44 | |
| 16 | 4 | 21 | 40 | 25 | 1 | 13 | 6 | 35 | 5 | 23 | 49 | 19 | 5 | 27 | 50 | 0 | |
| 17 | 11 | 15 | 9 | 45 | 4 | 24 | 29 | 4 | 7 | 14 | 8 | 23 | 6 | 19 | 24 | 16 | |
| 18 | 6 | 8 | 39 | 5 | 8 | 5 | 51 | 33 | 9 | 4 | 27 | 26 | 7 | 10 | 58 | 32 | |
| 19 | 1 | 2 | 8 | 26 | 11 | 17 | 14 | 2 | 10 | 24 | 46 | 29 | 8 | 2 | 32 | 48 | |
| 20 | 7 | 25 | 37 | 46 | 2 | 28 | 36 | 32 | 0 | 15 | 5 | 33 | 8 | 24 | 7 | 4 | |
| 21 | 2 | 19 | 7 | 6 | 6 | 9 | 59 | 1 | 2 | 5 | 24 | 36 | 9 | 15 | 41 | 20 | |
| 22 | 9 | 12 | 36 | 27 | 9 | 21 | 21 | 30 | 3 | 25 | 43 | 39 | 10 | 7 | 15 | 36 | |
| 23 | 4 | 6 | 5 | 47 | 1 | 2 | 43 | 59 | 5 | 16 | 2 | 43 | 10 | 28 | 49 | 52 | |
| 24 | 10 | 29 | 35 | 7 | 4 | 14 | 6 | 29 | 7 | 6 | 21 | 46 | 11 | 20 | 24 | 8 | |
| 25 | 5 | 23 | 4 | 28 | 7 | 25 | 28 | 58 | 8 | 26 | 40 | 50 | 0 | 11 | 58 | 24 | 8 |
| 26 | 0 | 16 | 33 | 48 | 11 | 6 | 51 | 27 | 10 | 16 | 59 | 53 | 1 | 3 | 32 | 40 | |
| 27 | 7 | 10 | 3 | 8 | 2 | 18 | 13 | 57 | 0 | 7 | 18 | 57 | 1 | 25 | 6 | 56 | |
| 28 | 2 | 3 | 32 | 29 | 5 | 29 | 36 | 26 | 1 | 27 | 38 | 0 | 2 | 16 | 41 | 12 | |
| 29 | 8 | 27 | 1 | 49 | 9 | 10 | 58 | 55 | 3 | 17 | 57 | 4 | 3 | 8 | 15 | 28 | |
| 30 | 3 | 20 | 31 | 9 | 0 | 22 | 21 | 24 | 5 | 8 | 16 | 7 | 3 | 29 | 49 | 44 | |
| 31 | 10 | 14 | 0 | 30 | 4 | 3 | 43 | 54 | 6 | 28 | 35 | 11 | 4 | 21 | 24 | 0 | |

## MEDII MOTVS SATELLITVM IOVIS AD DIES MENSIS.

# APRILIS.

| Die Mensis. | Primi | | | | Secundi | | | | Tertii | | | | Quarti | | | | Motus Apsidis Quarti. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ | Min. |
| 1 | 5 | 7 | 29 | 50 | 7 | 15 | 6 | 23 | 8 | 18 | 54 | 14 | 5 | 12 | 58 | 16 | |
| 2 | 0 | 0 | 59 | 10 | 10 | 26 | 28 | 52 | 10 | 9 | 13 | 18 | 6 | 4 | 32 | 32 | 9 |
| 3 | 6 | 24 | 28 | 31 | 2 | 7 | 51 | 21 | 11 | 29 | 32 | 21 | 6 | 26 | 6 | 48 | |
| 4 | 1 | 17 | 57 | 51 | 5 | 19 | 13 | 51 | 1 | 19 | 51 | 24 | 7 | 17 | 41 | 4 | |
| 5 | 8 | 11 | 27 | 11 | 9 | 0 | 36 | 20 | 3 | 10 | 10 | 28 | 8 | 9 | 15 | 20 | |
| 6 | 3 | 4 | 56 | 32 | 0 | 11 | 58 | 49 | 5 | 0 | 29 | 31 | 9 | 0 | 49 | 36 | |
| 7 | 9 | 28 | 25 | 52 | 3 | 23 | 21 | 18 | 6 | 20 | 48 | 35 | 9 | 22 | 23 | 52 | |
| 8 | 4 | 21 | 55 | 12 | 7 | 4 | 43 | 47 | 8 | 11 | 7 | 38 | 10 | 13 | 58 | 8 | |
| 9 | 11 | 15 | 24 | 33 | 10 | 16 | 6 | 17 | 10 | 1 | 26 | 42 | 11 | 5 | 32 | 24 | |
| 10 | 6 | 8 | 53 | 53 | 1 | 27 | 28 | 46 | 11 | 21 | 45 | 45 | 11 | 27 | 6 | 40 | |
| 11 | 1 | 2 | 23 | 13 | 5 | 8 | 51 | 15 | 1 | 12 | 4 | 49 | 0 | 18 | 40 | 56 | |
| 12 | 7 | 25 | 52 | 34 | 8 | 20 | 13 | 44 | 3 | 2 | 23 | 52 | 1 | 10 | 15 | 12 | 10 |
| 13 | 2 | 19 | 21 | 54 | 0 | 1 | 36 | 14 | 4 | 22 | 42 | 55 | 2 | 1 | 49 | 28 | |
| 14 | 9 | 12 | 51 | 14 | 3 | 12 | 58 | 43 | 6 | 13 | 1 | 59 | 2 | 23 | 23 | 44 | |
| 15 | 4 | 6 | 20 | 35 | 6 | 24 | 21 | 12 | 8 | 3 | 21 | 2 | 3 | 14 | 58 | 0 | |
| 16 | 10 | 29 | 49 | 55 | 10 | 5 | 43 | 41 | 9 | 23 | 40 | 6 | 4 | 6 | 32 | 16 | |
| 17 | 5 | 23 | 19 | 15 | 1 | 17 | 6 | 11 | 11 | 13 | 59 | 9 | 4 | 28 | 6 | 32 | |
| 18 | 0 | 16 | 48 | 36 | 4 | 28 | 28 | 40 | 1 | 4 | 18 | 13 | 5 | 19 | 40 | 48 | |
| 19 | 7 | 10 | 17 | 56 | 8 | 9 | 51 | 9 | 2 | 24 | 37 | 16 | 6 | 11 | 15 | 4 | |
| 20 | 2 | 3 | 47 | 16 | 11 | 21 | 13 | 38 | 4 | 14 | 56 | 20 | 7 | 2 | 49 | 20 | |
| 21 | 8 | 27 | 16 | 37 | 3 | 2 | 36 | 8 | 6 | 5 | 15 | 23 | 7 | 24 | 23 | 36 | |
| 22 | 3 | 20 | 45 | 57 | 6 | 13 | 58 | 37 | 7 | 25 | 34 | 27 | 8 | 15 | 57 | 52 | 11 |
| 23 | 10 | 14 | 15 | 17 | 9 | 25 | 21 | 6 | 9 | 15 | 53 | 30 | 9 | 7 | 32 | 8 | |
| 24 | 5 | 7 | 44 | 38 | 1 | 6 | 43 | 35 | 11 | 6 | 12 | 33 | 9 | 29 | 6 | 24 | |
| 25 | 0 | 1 | 13 | 58 | 4 | 18 | 6 | 5 | 0 | 26 | 31 | 37 | 10 | 20 | 40 | 40 | |
| 26 | 6 | 24 | 43 | 18 | 7 | 29 | 28 | 34 | 2 | 16 | 50 | 40 | 11 | 12 | 14 | 56 | |
| 27 | 1 | 18 | 12 | 39 | 11 | 10 | 51 | 3 | 4 | 7 | 9 | 44 | 0 | 3 | 49 | 12 | |
| 28 | 8 | 11 | 41 | 59 | 2 | 22 | 13 | 33 | 5 | 27 | 28 | 47 | 0 | 25 | 23 | 28 | |
| 29 | 3 | 5 | 11 | 19 | 6 | 3 | 36 | 2 | 7 | 17 | 47 | 51 | 1 | 16 | 57 | 44 | |
| 30 | 9 | 28 | 40 | 40 | 9 | 14 | 58 | 31 | 9 | 8 | 6 | 54 | 2 | 8 | 32 | 0 | |

## MEDII MOTUS SATELLITUM JOVIS AD DIES MENSIS

# MAII.

| Die Mensis. | Primi | | | | Secundi | | | | Tertii | | | | Quarti | | | | Motus Apsidis Quarti. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ | Min. |
| 1 | 4 | 22 | 10 | 0 | 0 | 26 | 21 | 0 | 10 | 28 | 25 | 57 | 3 | 0 | 6 | 16 | |
| 2 | 11 | 15 | 39 | 20 | 4 | 7 | 43 | 30 | 0 | 18 | 45 | 0 | 3 | 21 | 40 | 32 | 12 |
| 3 | 6 | 9 | 8 | 41 | 7 | 19 | 5 | 59 | 2 | 9 | 4 | 4 | 4 | 13 | 14 | 48 | |
| 4 | 1 | 2 | 38 | 1 | 11 | 0 | 28 | 28 | 3 | 29 | 23 | 8 | 5 | 4 | 49 | 4 | |
| 5 | 7 | 26 | 7 | 21 | 2 | 11 | 50 | 57 | 5 | 19 | 42 | 11 | 5 | 26 | 23 | 20 | |
| 6 | 2 | 19 | 36 | 42 | 5 | 23 | 13 | 27 | 7 | 10 | 1 | 15 | 6 | 17 | 57 | 36 | |
| 7 | 9 | 13 | 6 | 2 | 9 | 4 | 35 | 56 | 9 | 0 | 20 | 18 | 7 | 9 | 31 | 52 | |
| 8 | 4 | 6 | 35 | 22 | 0 | 15 | 58 | 25 | 10 | 20 | 39 | 22 | 8 | 1 | 6 | 8 | |
| 9 | 11 | 0 | 4 | 43 | 3 | 27 | 20 | 54 | 0 | 10 | 58 | 25 | 8 | 22 | 40 | 24 | |
| 10 | 5 | 23 | 34 | 3 | 7 | 8 | 43 | 24 | 2 | 1 | 17 | 29 | 9 | 14 | 14 | 40 | |
| 11 | 0 | 17 | 3 | 23 | 10 | 20 | 5 | 53 | 3 | 21 | 36 | 32 | 10 | 5 | 48 | 56 | |
| 12 | 7 | 10 | 32 | 44 | 2 | 1 | 28 | 22 | 5 | 11 | 55 | 36 | 10 | 27 | 23 | 12 | 13 |
| 13 | 2 | 4 | 2 | 4 | 5 | 12 | 50 | 52 | 7 | 2 | 14 | 39 | 11 | 18 | 57 | 28 | |
| 14 | 8 | 27 | 31 | 24 | 8 | 24 | 13 | 21 | 8 | 22 | 33 | 42 | 0 | 10 | 31 | 44 | |
| 15 | 3 | 21 | 0 | 45 | 0 | 5 | 35 | 50 | 10 | 12 | 52 | 46 | 1 | 2 | 6 | 0 | |
| 16 | 10 | 14 | 30 | 5 | 3 | 16 | 58 | 19 | 0 | 3 | 11 | 49 | 1 | 23 | 40 | 16 | |
| 17 | 5 | 7 | 59 | 25 | 6 | 28 | 20 | 49 | 1 | 23 | 30 | 52 | 2 | 15 | 14 | 32 | |
| 18 | 0 | 1 | 28 | 46 | 10 | 9 | 43 | 18 | 3 | 13 | 49 | 56 | 3 | 6 | 48 | 48 | |
| 19 | 6 | 24 | 58 | 6 | 1 | 21 | 5 | 47 | 5 | 4 | 9 | 0 | 3 | 28 | 23 | 4 | |
| 20 | 1 | 18 | 27 | 26 | 5 | 2 | 28 | 16 | 6 | 24 | 28 | 3 | 4 | 19 | 57 | 20 | |
| 21 | 8 | 11 | 56 | 47 | 8 | 13 | 50 | 46 | 8 | 14 | 47 | 7 | 5 | 11 | 31 | 36 | |
| 22 | 3 | 5 | 26 | 7 | 11 | 25 | 13 | 15 | 10 | 5 | 6 | 10 | 6 | 3 | 5 | 52 | 14 |
| 23 | 9 | 28 | 55 | 27 | 3 | 6 | 35 | 44 | 11 | 25 | 25 | 14 | 6 | 24 | 40 | 8 | |
| 24 | 4 | 22 | 24 | 48 | 6 | 17 | 58 | 13 | 1 | 15 | 44 | 17 | 7 | 16 | 14 | 24 | |
| 25 | 11 | 15 | 54 | 8 | 9 | 29 | 20 | 43 | 3 | 6 | 3 | 21 | 8 | 7 | 48 | 40 | |
| 26 | 6 | 9 | 23 | 28 | 1 | 10 | 43 | 12 | 4 | 26 | 22 | 24 | 8 | 29 | 22 | 56 | |
| 27 | 1 | 2 | 52 | 49 | 4 | 22 | 5 | 41 | 6 | 16 | 41 | 28 | 9 | 20 | 57 | 12 | |
| 28 | 7 | 26 | 22 | 9 | 8 | 3 | 28 | 11 | 8 | 7 | 0 | 31 | 10 | 12 | 31 | 28 | |
| 29 | 2 | 19 | 51 | 29 | 11 | 14 | 50 | 40 | 9 | 27 | 19 | 35 | 11 | 4 | 5 | 44 | |
| 30 | 9 | 13 | 20 | 50 | 2 | 26 | 13 | 9 | 11 | 17 | 38 | 38 | 11 | 25 | 40 | 0 | |
| 31 | 4 | 6 | 50 | 10 | 6 | 7 | 35 | 38 | 1 | 7 | 57 | 41 | 0 | 17 | 14 | 16 | |

## *MEDII MOTUS SATELLITUM JOVIS AD DIES MENSIS*

# JUNII.

| *Die Mensis.* | *Primi* | | | | *Secundi* | | | | *Tertii* | | | | *Quarti* | | | | *Motus Apsidis Quarti.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *Min.* |
| 1 | 11 | 0 | 19 | 30 | 9 | 18 | 58 | 8 | 2 | 28 | 16 | 44 | 1 | 8 | 48 | 32 | |
| 2 | 5 | 23 | 48 | 51 | 1 | 0 | 20 | 37 | 4 | 18 | 35 | 48 | 2 | 0 | 22 | 48 | 15 |
| 3 | 0 | 17 | 18 | 11 | 4 | 11 | 43 | 6 | 6 | 8 | 54 | 51 | 2 | 21 | 57 | 4 | |
| 4 | 7 | 10 | 47 | 31 | 7 | 23 | 5 | 35 | 7 | 29 | 13 | 55 | 3 | 13 | 31 | 20 | |
| 5 | 2 | 4 | 16 | 52 | 11 | 4 | 28 | 5 | 9 | 19 | 32 | 58 | 4 | 5 | 5 | 36 | |
| 6 | 8 | 27 | 46 | 12 | 2 | 15 | 50 | 34 | 11 | 9 | 52 | 2 | 4 | 26 | 39 | 52 | |
| 7 | 3 | 21 | 15 | 32 | 5 | 27 | 13 | 3 | 1 | 0 | 11 | 5 | 5 | 18 | 14 | 8 | |
| 8 | 10 | 14 | 44 | 53 | 9 | 8 | 35 | 32 | 2 | 20 | 30 | 9 | 6 | 9 | 48 | 24 | |
| 9 | 5 | 8 | 14 | 13 | 0 | 19 | 58 | 1 | 4 | 10 | 49 | 12 | 7 | 1 | 22 | 40 | |
| 10 | 0 | 1 | 43 | 33 | 4 | 1 | 20 | 31 | 6 | 1 | 8 | 16 | 7 | 22 | 56 | 56 | |
| 11 | 6 | 25 | 12 | 54 | 7 | 12 | 43 | 0 | 7 | 21 | 27 | 19 | 8 | 14 | 31 | 12 | 16 |
| 12 | 1 | 18 | 42 | 14 | 10 | 24 | 5 | 29 | 9 | 11 | 46 | 23 | 9 | 6 | 5 | 28 | |
| 13 | 8 | 12 | 11 | 34 | 2 | 5 | 27 | 59 | 11 | 2 | 5 | 26 | 9 | 27 | 39 | 44 | |
| 14 | 3 | 5 | 40 | 55 | 5 | 16 | 50 | 28 | 0 | 22 | 24 | 30 | 10 | 19 | 14 | 0 | |
| 15 | 9 | 29 | 10 | 15 | 8 | 28 | 12 | 57 | 2 | 12 | 43 | 33 | 11 | 10 | 48 | 16 | |
| 16 | 4 | 22 | 39 | 35 | 0 | 9 | 35 | 26 | 4 | 3 | 2 | 36 | 0 | 2 | 22 | 32 | |
| 17 | 11 | 16 | 8 | 56 | 3 | 20 | 57 | 56 | 5 | 23 | 21 | 40 | 0 | 23 | 56 | 48 | |
| 18 | 6 | 9 | 38 | 16 | 7 | 2 | 20 | 25 | 7 | 13 | 40 | 43 | 1 | 15 | 31 | 4 | |
| 19 | 1 | 3 | 7 | 36 | 10 | 13 | 42 | 54 | 9 | 3 | 59 | 46 | 2 | 7 | 5 | 20 | |
| 20 | 7 | 26 | 36 | 57 | 1 | 25 | 5 | 23 | 10 | 24 | 18 | 50 | 2 | 28 | 39 | 36 | |
| 21 | 2 | 20 | 6 | 17 | 5 | 6 | 27 | 53 | 0 | 14 | 37 | 53 | 3 | 20 | 13 | 52 | |
| 22 | 9 | 13 | 35 | 37 | 8 | 17 | 50 | 22 | 2 | 4 | 56 | 56 | 4 | 11 | 48 | 8 | 17 |
| 23 | 4 | 7 | 4 | 58 | 11 | 29 | 12 | 51 | 3 | 25 | 16 | 0 | 5 | 3 | 22 | 24 | |
| 24 | 11 | 0 | 34 | 18 | 3 | 10 | 35 | 20 | 5 | 15 | 35 | 3 | 5 | 24 | 56 | 40 | |
| 25 | 5 | 24 | 3 | 38 | 6 | 21 | 57 | 50 | 7 | 5 | 54 | 7 | 6 | 16 | 30 | 56 | |
| 26 | 0 | 17 | 32 | 59 | 10 | 3 | 20 | 19 | 8 | 26 | 13 | 11 | 7 | 8 | 5 | 12 | |
| 27 | 7 | 11 | 2 | 19 | 1 | 14 | 42 | 48 | 10 | 16 | 32 | 14 | 7 | 29 | 39 | 28 | |
| 28 | 2 | 4 | 31 | 39 | 4 | 26 | 5 | 17 | 0 | 6 | 51 | 18 | 8 | 21 | 13 | 44 | |
| 29 | 8 | 28 | 0 | 59 | 8 | 7 | 27 | 47 | 1 | 27 | 10 | 21 | 9 | 12 | 48 | 0 | |
| 30 | 3 | 21 | 30 | 20 | 11 | 18 | 50 | 16 | 3 | 17 | 29 | 25 | 10 | 4 | 22 | 16 | |

## MEDII MOTUS SATELLITUM JOVIS AD DIES MENSIS

# JULII.

| Die Mensis. | Primi | | | | Secundi | | | | Tertii | | | | Quarti | | | | Motus Apsidis Quarti. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ | Min. |
| 1 | 10 | 14 | 59 | 40 | 3 | 0 | 12 | 45 | 5 | 7 | 48 | 28 | 10 | 25 | 56 | 32 | |
| 2 | 5 | 8 | 29 | 0 | 6 | 11 | 35 | 14 | 6 | 28 | 7 | 31 | 11 | 17 | 30 | 48 | 18 |
| 3 | 0 | 1 | 58 | 20 | 9 | 22 | 57 | 44 | 8 | 18 | 26 | 35 | 0 | 9 | 5 | 4 | |
| 4 | 6 | 25 | 27 | 40 | 1 | 4 | 20 | 13 | 10 | 8 | 45 | 38 | 1 | 0 | 39 | 20 | |
| 5 | 1 | 18 | 57 | 1 | 4 | 15 | 42 | 42 | 11 | 29 | 4 | 42 | 1 | 22 | 13 | 36 | |
| 6 | 8 | 12 | 26 | 21 | 7 | 27 | 5 | 11 | 1 | 19 | 23 | 45 | 2 | 13 | 47 | 52 | |
| 7 | 3 | 5 | 55 | 41 | 11 | 8 | 27 | 41 | 3 | 9 | 42 | 49 | 3 | 5 | 22 | 8 | |
| 8 | 9 | 29 | 25 | 2 | 2 | 19 | 50 | 10 | 5 | 0 | 1 | 52 | 3 | 26 | 56 | 24 | |
| 9 | 4 | 22 | 54 | 22 | 6 | 1 | 12 | 39 | 6 | 20 | 20 | 55 | 4 | 18 | 30 | 40 | |
| 10 | 11 | 16 | 23 | 42 | 9 | 12 | 35 | 9 | 8 | 10 | 39 | 59 | 5 | 10 | 4 | 56 | |
| 11 | 6 | 9 | 53 | 3 | 0 | 23 | 57 | 38 | 10 | 0 | 59 | 2 | 6 | 1 | 39 | 12 | |
| 12 | 1 | 3 | 22 | 23 | 4 | 5 | 20 | 7 | 11 | 21 | 18 | 6 | 6 | 23 | 13 | 28 | 19 |
| 13 | 7 | 26 | 51 | 43 | 7 | 16 | 42 | 36 | 1 | 11 | 37 | 9 | 7 | 14 | 47 | 44 | |
| 14 | 2 | 20 | 21 | 4 | 10 | 28 | 5 | 6 | 3 | 1 | 56 | 13 | 8 | 6 | 22 | 0 | |
| 15 | 9 | 13 | 50 | 24 | 2 | 9 | 27 | 35 | 4 | 22 | 15 | 16 | 8 | 27 | 56 | 16 | |
| 16 | 4 | 7 | 19 | 44 | 5 | 20 | 50 | 4 | 6 | 12 | 34 | 19 | 9 | 19 | 30 | 32 | |
| 17 | 11 | 0 | 49 | 5 | 9 | 2 | 12 | 33 | 8 | 2 | 53 | 23 | 10 | 11 | 4 | 48 | |
| 18 | 5 | 24 | 18 | 25 | 0 | 13 | 35 | 3 | 9 | 23 | 12 | 27 | 11 | 2 | 39 | 4 | |
| 19 | 0 | 17 | 47 | 45 | 3 | 24 | 57 | 32 | 11 | 13 | 31 | 30 | 11 | 24 | 13 | 20 | |
| 20 | 7 | 11 | 17 | 6 | 7 | 6 | 20 | 1 | 1 | 3 | 50 | 34 | 0 | 15 | 47 | 36 | |
| 21 | 2 | 4 | 46 | 26 | 10 | 17 | 42 | 30 | 2 | 24 | 9 | 37 | 1 | 7 | 21 | 52 | |
| 22 | 8 | 28 | 15 | 46 | 1 | 29 | 5 | 0 | 4 | 14 | 28 | 41 | 1 | 28 | 56 | 8 | 20 |
| 23 | 3 | 21 | 45 | 7 | 5 | 10 | 27 | 29 | 6 | 4 | 47 | 44 | 2 | 20 | 30 | 24 | |
| 24 | 10 | 15 | 14 | 27 | 8 | 21 | 49 | 58 | 7 | 25 | 6 | 48 | 3 | 12 | 4 | 40 | |
| 25 | 5 | 8 | 43 | 47 | 0 | 3 | 12 | 28 | 9 | 15 | 25 | 51 | 4 | 3 | 38 | 56 | |
| 26 | 0 | 2 | 13 | 8 | 3 | 14 | 34 | 57 | 11 | 5 | 44 | 54 | 4 | 25 | 13 | 12 | |
| 27 | 6 | 25 | 42 | 28 | 6 | 25 | 57 | 26 | 0 | 26 | 3 | 58 | 5 | 16 | 47 | 28 | |
| 28 | 1 | 19 | 11 | 48 | 10 | 7 | 19 | 55 | 2 | 16 | 23 | 1 | 6 | 8 | 21 | 44 | |
| 29 | 8 | 12 | 41 | 9 | 1 | 18 | 42 | 25 | 4 | 6 | 42 | 4 | 6 | 29 | 56 | 0 | |
| 30 | 3 | 6 | 10 | 29 | 5 | 0 | 4 | 54 | 5 | 27 | 1 | 8 | 7 | 21 | 30 | 16 | |
| 31 | 9 | 29 | 39 | 49 | 8 | 11 | 27 | 23 | 7 | 17 | 20 | 12 | 8 | 13 | 4 | 32 | |

## MEDII MOTVS SATELLITVM IOVIS AD DIES MENSIS

# AUGUSTI.

| Die Mensis. | Primi | | | | Secundi | | | | Tertii | | | | Quarti | | | | Motus Apsidis Quarti. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ | Min. |
| 1 | 4 | 23 | 9 | 10 | 11 | 22 | 49 | 52 | 9 | 7 | 39 | 16 | 9 | 4 | 38 | 48 | 21 |
| 2 | 11 | 16 | 38 | 30 | 3 | 4 | 12 | 22 | 10 | 27 | 58 | 19 | 9 | 26 | 13 | 4 | |
| 3 | 6 | 10 | 7 | 50 | 6 | 15 | 34 | 51 | 0 | 18 | 17 | 22 | 10 | 17 | 47 | 20 | |
| 4 | 1 | 3 | 37 | 11 | 9 | 26 | 57 | 20 | 2 | 8 | 36 | 26 | 11 | 9 | 21 | 36 | |
| 5 | 7 | 27 | 6 | 31 | 1 | 8 | 19 | 49 | 3 | 28 | 55 | 29 | 0 | 0 | 55 | 52 | |
| 6 | 2 | 20 | 35 | 51 | 4 | 19 | 42 | 18 | 5 | 19 | 14 | 33 | 0 | 22 | 30 | 8 | |
| 7 | 9 | 14 | 5 | 12 | 8 | 1 | 4 | 48 | 7 | 9 | 33 | 36 | 1 | 14 | 4 | 24 | |
| 8 | 4 | 7 | 34 | 32 | 11 | 12 | 27 | 17 | 8 | 29 | 52 | 39 | 2 | 5 | 38 | 40 | |
| 9 | 11 | 1 | 3 | 52 | 2 | 23 | 49 | 46 | 10 | 20 | 11 | 43 | 2 | 27 | 12 | 56 | |
| 10 | 5 | 24 | 33 | 13 | 6 | 5 | 12 | 16 | 0 | 10 | 30 | 46 | 3 | 18 | 47 | 12 | |
| 11 | 0 | 18 | 2 | 33 | 9 | 16 | 34 | 45 | 2 | 0 | 49 | 50 | 4 | 10 | 21 | 28 | 22 |
| 12 | 7 | 11 | 31 | 53 | 0 | 27 | 57 | 14 | 3 | 21 | 8 | 53 | 5 | 1 | 55 | 44 | |
| 13 | 2 | 5 | 1 | 14 | 4 | 9 | 19 | 43 | 5 | 11 | 27 | 56 | 5 | 23 | 30 | 0 | |
| 14 | 8 | 28 | 30 | 34 | 7 | 20 | 42 | 13 | 7 | 1 | 47 | 0 | 6 | 15 | 4 | 16 | |
| 15 | 3 | 21 | 59 | 54 | 11 | 2 | 4 | 42 | 8 | 22 | 6 | 3 | 7 | 6 | 38 | 32 | |
| 16 | 10 | 15 | 29 | 15 | 2 | 13 | 27 | 11 | 10 | 12 | 25 | 7 | 7 | 28 | 12 | 48 | |
| 17 | 5 | 8 | 58 | 35 | 5 | 24 | 49 | 41 | 0 | 2 | 44 | 10 | 8 | 19 | 47 | 4 | |
| 18 | 0 | 2 | 27 | 55 | 9 | 6 | 12 | 10 | 1 | 23 | 3 | 14 | 9 | 11 | 21 | 20 | |
| 19 | 6 | 25 | 57 | 16 | 0 | 17 | 34 | 39 | 3 | 13 | 22 | 17 | 10 | 2 | 55 | 36 | |
| 20 | 1 | 19 | 26 | 36 | 3 | 28 | 57 | 8 | 5 | 3 | 41 | 21 | 10 | 24 | 29 | 52 | |
| 21 | 8 | 12 | 55 | 56 | 7 | 10 | 19 | 38 | 6 | 24 | 0 | 24 | 11 | 16 | 4 | 8 | |
| 22 | 3 | 6 | 25 | 17 | 10 | 21 | 42 | 7 | 8 | 14 | 19 | 28 | 0 | 7 | 38 | 24 | 23 |
| 23 | 9 | 29 | 54 | 37 | 2 | 3 | 4 | 36 | 10 | 4 | 38 | 31 | 0 | 29 | 12 | 40 | |
| 24 | 4 | 23 | 23 | 57 | 5 | 14 | 27 | 5 | 11 | 24 | 57 | 35 | 1 | 20 | 46 | 56 | |
| 25 | 11 | 16 | 53 | 18 | 8 | 25 | 49 | 35 | 1 | 15 | 16 | 38 | 2 | 12 | 21 | 12 | |
| 26 | 6 | 10 | 22 | 38 | 0 | 7 | 12 | 4 | 3 | 5 | 35 | 42 | 3 | 3 | 55 | 28 | |
| 27 | 1 | 3 | 51 | 58 | 3 | 18 | 34 | 33 | 4 | 25 | 54 | 45 | 3 | 25 | 29 | 44 | |
| 28 | 7 | 27 | 21 | 19 | 6 | 29 | 57 | 2 | 6 | 16 | 13 | 48 | 4 | 17 | 4 | 0 | |
| 29 | 2 | 20 | 50 | 39 | 10 | 11 | 19 | 32 | 8 | 6 | 32 | 52 | 5 | 8 | 38 | 16 | |
| 30 | 9 | 14 | 19 | 59 | 1 | 22 | 42 | 1 | 9 | 26 | 51 | 55 | 6 | 0 | 12 | 32 | |
| 31 | 4 | 7 | 49 | 20 | 5 | 4 | 4 | 30 | 11 | 17 | 10 | 59 | 6 | 21 | 46 | 48 | |

## *MEDII MOTUS SATELLITUM JOVIS AD DIES MENSIS*

# SEPTEMBRIS.

| *Die Mensis.* | *Primi* | | | | *Secundi* | | | | *Tertii* | | | | *Quarti* | | | | *Motus Apsidis Quarti.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *Min.* |
| 1 | 11 | 1 | 18 | 40 | 8 | 15 | 26 | 59 | 1 | 7 | 30 | 2 | 7 | 13 | 21 | 4 | 24 |
| 2 | 5 | 24 | 48 | 0 | 11 | 26 | 49 | 29 | 2 | 27 | 49 | 5 | 8 | 4 | 55 | 20 | |
| 3 | 0 | 18 | 17 | 21 | 3 | 8 | 11 | 58 | 4 | 18 | 8 | 9 | 8 | 26 | 29 | 36 | |
| 4 | 7 | 11 | 46 | 41 | 6 | 19 | 34 | 27 | 6 | 8 | 27 | 12 | 9 | 18 | 3 | 52 | |
| 5 | 2 | 5 | 16 | 1 | 10 | 0 | 56 | 57 | 7 | 28 | 46 | 16 | 10 | 9 | 38 | 8 | |
| 6 | 8 | 28 | 45 | 22 | 1 | 12 | 19 | 26 | 9 | 19 | 5 | 19 | 11 | 1 | 12 | 24 | |
| 7 | 3 | 22 | 14 | 42 | 4 | 23 | 41 | 55 | 11 | 9 | 24 | 23 | 11 | 22 | 46 | 40 | |
| 8 | 10 | 15 | 44 | 2 | 8 | 5 | 4 | 24 | 0 | 29 | 43 | 26 | 0 | 14 | 20 | 56 | |
| 9 | 5 | 9 | 13 | 23 | 11 | 16 | 26 | 54 | 2 | 20 | 2 | 30 | 1 | 5 | 55 | 12 | |
| 10 | 0 | 2 | 42 | 43 | 2 | 27 | 49 | 23 | 4 | 10 | 21 | 33 | 1 | 27 | 29 | 28 | |
| 11 | 6 | 26 | 12 | 3 | 6 | 9 | 11 | 52 | 6 | 0 | 40 | 37 | 2 | 19 | 3 | 44 | 25 |
| 12 | 1 | 19 | 41 | 24 | 9 | 20 | 34 | 21 | 7 | 20 | 59 | 40 | 3 | 10 | 38 | 0 | |
| 13 | 8 | 13 | 10 | 44 | 1 | 1 | 56 | 51 | 9 | 11 | 18 | 44 | 4 | 2 | 12 | 16 | |
| 14 | 3 | 6 | 40 | 4 | 4 | 13 | 19 | 20 | 11 | 1 | 37 | 47 | 4 | 23 | 46 | 32 | |
| 15 | 10 | 0 | 9 | 25 | 7 | 24 | 41 | 49 | 0 | 21 | 56 | 51 | 5 | 15 | 20 | 48 | |
| 16 | 4 | 23 | 38 | 45 | 11 | 6 | 4 | 18 | 2 | 12 | 15 | 54 | 6 | 6 | 55 | 4 | |
| 17 | 11 | 17 | 8 | 5 | 2 | 17 | 26 | 48 | 4 | 2 | 34 | 57 | 6 | 28 | 29 | 20 | |
| 18 | 6 | 10 | 37 | 26 | 5 | 28 | 49 | 17 | 5 | 22 | 54 | 0 | 7 | 20 | 3 | 36 | |
| 19 | 1 | 4 | 6 | 46 | 9 | 10 | 11 | 46 | 7 | 13 | 13 | 4 | 8 | 11 | 37 | 52 | |
| 20 | 7 | 27 | 36 | 6 | 0 | 21 | 34 | 15 | 9 | 3 | 32 | 7 | 9 | 3 | 12 | 8 | |
| 21 | 2 | 21 | 5 | 27 | 4 | 2 | 56 | 45 | 10 | 23 | 51 | 11 | 9 | 24 | 46 | 24 | |
| 22 | 9 | 14 | 34 | 47 | 7 | 14 | 19 | 14 | 0 | 14 | 10 | 14 | 10 | 16 | 20 | 40 | 26 |
| 23 | 4 | 8 | 4 | 7 | 10 | 25 | 41 | 43 | 2 | 4 | 29 | 18 | 11 | 7 | 54 | 56 | |
| 24 | 11 | 1 | 33 | 28 | 2 | 7 | 4 | 12 | 3 | 24 | 48 | 21 | 11 | 29 | 29 | 12 | |
| 25 | 5 | 25 | 2 | 48 | 5 | 18 | 26 | 42 | 5 | 15 | 7 | 25 | 0 | 21 | 3 | 28 | |
| 26 | 0 | 18 | 32 | 8 | 8 | 29 | 49 | 11 | 7 | 5 | 26 | 28 | 1 | 12 | 37 | 44 | |
| 27 | 7 | 12 | 1 | 29 | 0 | 11 | 11 | 40 | 8 | 25 | 45 | 32 | 2 | 4 | 12 | 0 | |
| 28 | 2 | 5 | 30 | 49 | 3 | 22 | 34 | 9 | 10 | 16 | 4 | 35 | 2 | 25 | 46 | 16 | |
| 29 | 8 | 29 | 0 | 9 | 7 | 3 | 56 | 39 | 0 | 6 | 23 | 39 | 3 | 17 | 20 | 32 | |
| 30 | 3 | 22 | 29 | 30 | 10 | 15 | 19 | 8 | 1 | 26 | 42 | 42 | 4 | 8 | 54 | 48 | |

## *MEDII MOTUS SATELLITUM JOVIS AD DIES MENSIS*

# OCTOBRIS.

| *Die Mensis.* | *Primi* | | | | *Secundi* | | | | *Tertii* | | | | *Quarti* | | | | *Motus Apsidis Quarti.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *Min.* |
| 1 | 10 | 15 | 58 | 50 | 1 | 26 | 41 | 37 | 3 | 17 | 1 | 46 | 5 | 0 | 29 | 4 | |
| 2 | 5 | 9 | 28 | 10 | 5 | 8 | 4 | 6 | 5 | 7 | 20 | 49 | 5 | 22 | 3 | 20 | 27 |
| 3 | 0 | 2 | 57 | 31 | 8 | 19 | 26 | 36 | 6 | 27 | 39 | 53 | 6 | 13 | 37 | 36 | |
| 4 | 6 | 26 | 26 | 51 | 0 | 0 | 49 | 5 | 8 | 17 | 58 | 56 | 7 | 5 | 11 | 52 | |
| 5 | 1 | 19 | 56 | 11 | 3 | 12 | 11 | 34 | 10 | 8 | 18 | 0 | 7 | 26 | 46 | 8 | |
| 6 | 8 | 13 | 25 | 32 | 6 | 23 | 34 | 4 | 11 | 28 | 37 | 3 | 8 | 18 | 20 | 24 | |
| 7 | 3 | 6 | 54 | 52 | 10 | 4 | 56 | 33 | 1 | 18 | 56 | 6 | 9 | 9 | 54 | 40 | |
| 8 | 10 | 0 | 24 | 12 | 1 | 16 | 19 | 2 | 3 | 9 | 15 | 10 | 10 | 1 | 28 | 56 | |
| 9 | 4 | 23 | 53 | 33 | 4 | 27 | 41 | 31 | 4 | 29 | 34 | 13 | 10 | 23 | 3 | 12 | |
| 10 | 11 | 17 | 22 | 53 | 8 | 9 | 4 | 1 | 6 | 19 | 53 | 17 | 11 | 14 | 37 | 28 | |
| 11 | 6 | 10 | 52 | 13 | 11 | 20 | 26 | 30 | 8 | 10 | 12 | 20 | 0 | 6 | 11 | 44 | |
| 12 | 1 | 4 | 21 | 34 | 3 | 1 | 48 | 59 | 10 | 0 | 31 | 24 | 0 | 27 | 46 | 0 | 28 |
| 13 | 7 | 27 | 50 | 54 | 6 | 13 | 11 | 28 | 11 | 20 | 50 | 27 | 1 | 19 | 20 | 16 | |
| 14 | 2 | 21 | 20 | 14 | 9 | 24 | 33 | 58 | 1 | 11 | 9 | 31 | 2 | 10 | 54 | 32 | |
| 15 | 9 | 14 | 49 | 35 | 11 | 5 | 56 | 27 | 3 | 1 | 28 | 34 | 3 | 2 | 28 | 48 | |
| 16 | 4 | 8 | 18 | 55 | 4 | 17 | 18 | 56 | 4 | 21 | 47 | 38 | 3 | 24 | 3 | 4 | |
| 17 | 11 | 1 | 48 | 15 | 7 | 28 | 41 | 25 | 6 | 12 | 6 | 41 | 4 | 15 | 37 | 20 | |
| 18 | 5 | 25 | 17 | 36 | 11 | 10 | 3 | 55 | 8 | 2 | 25 | 45 | 5 | 7 | 11 | 36 | |
| 19 | 0 | 18 | 46 | 56 | 2 | 21 | 26 | 24 | 9 | 22 | 44 | 48 | 5 | 28 | 45 | 52 | |
| 20 | 7 | 12 | 16 | 16 | 6 | 2 | 48 | 53 | 11 | 13 | 3 | 51 | 6 | 20 | 20 | 8 | |
| 21 | 2 | 5 | 45 | 37 | 9 | 14 | 11 | 22 | 1 | 3 | 22 | 55 | 7 | 11 | 54 | 24 | |
| 22 | 8 | 29 | 14 | 57 | 0 | 25 | 33 | 52 | 2 | 23 | 41 | 58 | 8 | 3 | 28 | 40 | |
| 23 | 3 | 22 | 44 | 17 | 4 | 6 | 56 | 21 | 4 | 14 | 1 | 2 | 8 | 25 | 2 | 56 | 29 |
| 24 | 10 | 16 | 13 | 38 | 7 | 18 | 18 | 50 | 6 | 4 | 20 | 5 | 9 | 16 | 37 | 12 | |
| 25 | 5 | 9 | 42 | 58 | 10 | 29 | 41 | 19 | 7 | 24 | 39 | 8 | 10 | 8 | 11 | 28 | |
| 26 | 0 | 3 | 12 | 18 | 2 | 11 | 3 | 49 | 9 | 14 | 58 | 12 | 10 | 29 | 45 | 44 | |
| 27 | 6 | 26 | 41 | 39 | 5 | 22 | 26 | 18 | 11 | 5 | 17 | 15 | 11 | 21 | 20 | 0 | |
| 28 | 1 | 20 | 10 | 59 | 9 | 3 | 48 | 47 | 0 | 25 | 36 | 19 | 0 | 12 | 54 | 16 | |
| 29 | 8 | 13 | 40 | 19 | 0 | 15 | 11 | 17 | 2 | 15 | 55 | 22 | 1 | 4 | 28 | 32 | |
| 30 | 3 | 7 | 9 | 40 | 3 | 26 | 33 | 46 | 4 | 6 | 14 | 26 | 1 | 26 | 2 | 48 | |
| 31 | 10 | 0 | 39 | 0 | 7 | 7 | 56 | 15 | 5 | 26 | 33 | 29 | 2 | 17 | 37 | 4 | |

## MEDII MOTUS SATELLITUM JOVIS AD DIES MENSIS

# NOVEMBRIS.

| Die Mensis. | Primi | | | | Secundi | | | | Tertii | | | | Quarti | | | | Motus Apsidis Quarti. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S. | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ | Min. |
| 1 | 4 | 24 | 8 | 20 | 10 | 19 | 18 | 44 | 7 | 16 | 52 | 33 | 3 | 9 | 11 | 20 | 30 |
| 2 | 11 | 17 | 37 | 41 | 2 | 0 | 41 | 14 | 9 | 7 | 11 | 36 | 4 | 0 | 45 | 36 | |
| 3 | 6 | 11 | 7 | 1 | 5 | 12 | 3 | 43 | 10 | 27 | 30 | 40 | 4 | 22 | 19 | 52 | |
| 4 | 1 | 4 | 36 | 21 | 8 | 23 | 26 | 12 | 0 | 17 | 49 | 43 | 5 | 13 | 54 | 8 | |
| 5 | 7 | 28 | 5 | 42 | 0 | 4 | 48 | 41 | 2 | 8 | 8 | 47 | 6 | 5 | 28 | 24 | |
| 6 | 2 | 21 | 35 | 2 | 3 | 16 | 11 | 11 | 3 | 28 | 27 | 50 | 6 | 27 | 2 | 40 | |
| 7 | 9 | 15 | 4 | 22 | 6 | 27 | 33 | 40 | 5 | 18 | 46 | 54 | 7 | 18 | 36 | 56 | |
| 8 | 4 | 8 | 33 | 43 | 10 | 8 | 56 | 9 | 7 | 9 | 5 | 57 | 8 | 10 | 11 | 12 | |
| 9 | 11 | 2 | 3 | 3 | 1 | 20 | 18 | 38 | 8 | 29 | 25 | 0 | 9 | 1 | 45 | 28 | |
| 10 | 5 | 25 | 32 | 23 | 5 | 1 | 41 | 8 | 10 | 19 | 44 | 4 | 9 | 23 | 19 | 44 | |
| 11 | 0 | 19 | 1 | 44 | 8 | 13 | 3 | 37 | 0 | 10 | 3 | 7 | 10 | 14 | 54 | 0 | 31 |
| 12 | 7 | 12 | 31 | 4 | 11 | 24 | 26 | 6 | 2 | 0 | 22 | 11 | 11 | 6 | 28 | 16 | |
| 13 | 2 | 6 | 0 | 24 | 3 | 5 | 48 | 35 | 3 | 20 | 41 | 14 | 11 | 28 | 2 | 32 | |
| 14 | 8 | 29 | 29 | 45 | 6 | 17 | 11 | 5 | 5 | 11 | 0 | 17 | 0 | 19 | 36 | 48 | |
| 15 | 3 | 22 | 59 | 5 | 9 | 28 | 33 | 34 | 7 | 1 | 19 | 21 | 1 | 11 | 11 | 4 | |
| 16 | 10 | 16 | 28 | 25 | 1 | 9 | 56 | 3 | 8 | 21 | 38 | 24 | 2 | 2 | 45 | 20 | |
| 17 | 5 | 9 | 57 | 46 | 4 | 21 | 18 | 32 | 10 | 11 | 57 | 28 | 2 | 24 | 19 | 36 | |
| 18 | 0 | 3 | 27 | 6 | 8 | 2 | 41 | 2 | 0 | 2 | 16 | 31 | 3 | 15 | 53 | 52 | |
| 19 | 6 | 26 | 56 | 26 | 11 | 14 | 3 | 31 | 1 | 22 | 35 | 35 | 4 | 7 | 28 | 8 | |
| 20 | 1 | 20 | 25 | 47 | 2 | 25 | 26 | 0 | 3 | 12 | 54 | 38 | 4 | 29 | 2 | 24 | |
| 21 | 8 | 13 | 55 | 7 | 6 | 6 | 48 | 30 | 5 | 3 | 13 | 42 | 5 | 20 | 36 | 40 | 32 |
| 22 | 3 | 7 | 24 | 27 | 9 | 18 | 10 | 59 | 6 | 23 | 32 | 45 | 6 | 12 | 10 | 56 | |
| 23 | 10 | 0 | 53 | 48 | 0 | 29 | 33 | 28 | 8 | 13 | 51 | 49 | 7 | 3 | 45 | 12 | |
| 24 | 4 | 24 | 23 | 8 | 4 | 10 | 55 | 57 | 10 | 4 | 10 | 52 | 7 | 25 | 19 | 28 | |
| 25 | 11 | 17 | 52 | 28 | 7 | 22 | 18 | 27 | 11 | 24 | 29 | 56 | 8 | 16 | 53 | 44 | |
| 26 | 6 | 11 | 21 | 49 | 11 | 3 | 40 | 56 | 1 | 14 | 48 | 59 | 9 | 8 | 28 | 0 | |
| 27 | 1 | 4 | 51 | 9 | 2 | 15 | 3 | 25 | 3 | 5 | 8 | 3 | 10 | 0 | 2 | 16 | |
| 28 | 7 | 28 | 20 | 29 | 5 | 26 | 25 | 54 | 4 | 25 | 27 | 6 | 10 | 21 | 36 | 32 | |
| 29 | 2 | 21 | 49 | 50 | 9 | 7 | 48 | 24 | 6 | 15 | 46 | 9 | 11 | 13 | 10 | 48 | |
| 30 | 9 | 15 | 19 | 10 | 0 | 19 | 10 | 53 | 8 | 6 | 5 | 13 | 0 | 4 | 45 | 4 | |

## MEDII MOTVS SATELLITVM IOVIS AD DIES MENSIS

# DECEMBRIS.

| Die Mensis. | Primi | | | | Secundi | | | | Tertii | | | | Quarti | | | | Motus Apsidis Quarti. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ | S | o | ′ | ″ | Min. |
| 1 | 4 | 8 | 48 | 30 | 4 | 0 | 33 | 22 | 9 | 26 | 24 | 16 | 0 | 26 | 19 | 20 | 33 |
| 2 | 11 | 2 | 17 | 51 | 7 | 11 | 55 | 52 | 11 | 16 | 43 | 20 | 1 | 17 | 53 | 36 | |
| 3 | 5 | 25 | 47 | 11 | 10 | 23 | 18 | 21 | 1 | 7 | 2 | 23 | 2 | 9 | 27 | 52 | |
| 4 | 0 | 19 | 16 | 31 | 2 | 4 | 40 | 50 | 2 | 27 | 21 | 26 | 3 | 1 | 2 | 8 | |
| 5 | 7 | 12 | 45 | 52 | 5 | 16 | 3 | 19 | 4 | 17 | 40 | 30 | 3 | 22 | 36 | 24 | |
| 6 | 2 | 6 | 15 | 12 | 8 | 27 | 25 | 49 | 6 | 7 | 59 | 33 | 4 | 14 | 10 | 40 | |
| 7 | 8 | 29 | 44 | 32 | 0 | 8 | 48 | 18 | 7 | 28 | 18 | 37 | 5 | 5 | 44 | 56 | |
| 8 | 3 | 23 | 13 | 53 | 3 | 20 | 10 | 47 | 9 | 18 | 37 | 40 | 5 | 27 | 19 | 12 | |
| 9 | 10 | 16 | 43 | 13 | 7 | 1 | 33 | 16 | 11 | 8 | 56 | 44 | 6 | 18 | 53 | 28 | |
| 10 | 5 | 10 | 12 | 33 | 10 | 12 | 55 | 46 | 0 | 29 | 15 | 47 | 7 | 10 | 27 | 44 | |
| 11 | 0 | 3 | 41 | 54 | 1 | 24 | 18 | 15 | 2 | 19 | 34 | 51 | 8 | 2 | 2 | 0 | 34 |
| 12 | 6 | 27 | 11 | 14 | 5 | 5 | 40 | 44 | 4 | 9 | 53 | 54 | 8 | 23 | 36 | 16 | |
| 13 | 1 | 20 | 40 | 34 | 8 | 17 | 3 | 14 | 6 | 0 | 12 | 58 | 9 | 15 | 10 | 32 | |
| 14 | 8 | 14 | 9 | 55 | 11 | 28 | 25 | 43 | 7 | 20 | 32 | 1 | 10 | 6 | 44 | 48 | |
| 15 | 3 | 7 | 39 | 15 | 3 | 9 | 48 | 12 | 9 | 10 | 51 | 5 | 10 | 28 | 19 | 4 | |
| 16 | 10 | 1 | 8 | 35 | 6 | 21 | 10 | 41 | 11 | 1 | 10 | 8 | 11 | 19 | 53 | 20 | |
| 17 | 4 | 24 | 37 | 56 | 10 | 2 | 33 | 11 | 0 | 21 | 29 | 12 | 0 | 11 | 27 | 36 | |
| 18 | 11 | 18 | 7 | 16 | 1 | 13 | 55 | 40 | 2 | 11 | 48 | 15 | 1 | 3 | 1 | 52 | |
| 19 | 6 | 11 | 36 | 36 | 4 | 25 | 18 | 9 | 4 | 2 | 7 | 18 | 1 | 24 | 36 | 8 | |
| 20 | 1 | 5 | 5 | 57 | 8 | 6 | 40 | 38 | 5 | 22 | 26 | 22 | 2 | 16 | 10 | 24 | |
| 21 | 7 | 28 | 35 | 17 | 11 | 18 | 3 | 8 | 7 | 12 | 45 | 25 | 3 | 7 | 44 | 40 | 35 |
| 22 | 2 | 22 | 4 | 37 | 2 | 29 | 25 | 37 | 9 | 3 | 4 | 29 | 3 | 29 | 18 | 56 | |
| 23 | 9 | 15 | 33 | 58 | 6 | 10 | 48 | 6 | 10 | 23 | 23 | 32 | 4 | 20 | 53 | 12 | |
| 24 | 4 | 9 | 3 | 18 | 9 | 22 | 10 | 35 | 0 | 13 | 42 | 36 | 5 | 12 | 27 | 28 | |
| 25 | 11 | 2 | 32 | 38 | 1 | 3 | 33 | 5 | 2 | 4 | 1 | 39 | 6 | 4 | 1 | 44 | |
| 26 | 5 | 26 | 1 | 58 | 4 | 14 | 55 | 34 | 3 | 24 | 20 | 43 | 6 | 25 | 36 | 0 | |
| 27 | 0 | 19 | 31 | 18 | 7 | 26 | 18 | 3 | 5 | 14 | 39 | 47 | 7 | 17 | 10 | 16 | |
| 28 | 7 | 13 | 0 | 38 | 11 | 7 | 40 | 32 | 7 | 4 | 58 | 50 | 8 | 8 | 44 | 32 | |
| 29 | 2 | 6 | 29 | 59 | 2 | 19 | 3 | 2 | 8 | 25 | 17 | 53 | 9 | 0 | 18 | 48 | |
| 30 | 8 | 29 | 59 | 19 | 6 | 0 | 25 | 31 | 10 | 15 | 36 | 57 | 9 | 21 | 53 | 4 | |
| 31 | 3 | 23 | 28 | 40 | 9 | 11 | 48 | 0 | 0 | 5 | 56 | 0 | 10 | 13 | 27 | 20 | 36 |

## *MEDII MOTUS SATELLITUM JOVIS IN ANNORUM CENTURIIS.*

| *Annis Collectis.* | *Primi* | | | | *Secundi* | | | | *Tertii* | | | | *Quarti* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* |
| 100 | 7 | 25 | 0 | 0 | 3 | 24 | 22 | 30 | 1 | 21 | 31 | 40 | 6 | 24 | 50 | 0 |
| 200 | 3 | 20 | 0 | 0 | 7 | 18 | 45 | 0 | 3 | 13 | 3 | 20 | 1 | 19 | 40 | 0 |
| 300 | 11 | 15 | 0 | 0 | 11 | 13 | 7 | 30 | 5 | 4 | 35 | 0 | 8 | 14 | 30 | 0 |

*In centum autem Annis progreditur Apsis Quarti duo Signa.*

## *IN HORIS.*

| *H.* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* | *S* | *o* | *'* | *''* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 8 | 28 | 43 | 0 | 4 | 13 | 26 | 0 | 2 | 5 | 48 | 0 | 0 | 53 | 56 |
| 2 | 0 | 16 | 57 | 27 | 0 | 8 | 26 | 52 | 0 | 4 | 11 | 35 | 0 | 1 | 47 | 52 |
| 3 | 0 | 25 | 26 | 10 | 0 | 12 | 40 | 18 | 0 | 6 | 17 | 23 | 0 | 2 | 41 | 47 |
| 4 | 1 | 3 | 54 | 53 | 0 | 16 | 53 | 44 | 0 | 8 | 23 | 11 | 0 | 3 | 35 | 43 |
| 5 | 1 | 12 | 23 | 37 | 0 | 21 | 7 | 10 | 0 | 10 | 28 | 58 | 0 | 4 | 29 | 39 |
| 6 | 1 | 20 | 52 | 20 | 0 | 25 | 20 | 37 | 0 | 12 | 34 | 46 | 0 | 5 | 23 | 34 |
| 7 | 1 | 29 | 21 | 3 | 0 | 29 | 34 | 3 | 0 | 14 | 40 | 34 | 0 | 6 | 17 | 30 |
| 8 | 2 | 7 | 49 | 47 | 1 | 3 | 47 | 29 | 0 | 16 | 46 | 21 | 0 | 7 | 11 | 26 |
| 9 | 2 | 16 | 18 | 30 | 1 | 8 | 0 | 55 | 0 | 18 | 52 | 9 | 0 | 8 | 5 | 21 |
| 10 | 2 | 24 | 47 | 13 | 1 | 12 | 14 | 21 | 0 | 20 | 57 | 56 | 0 | 8 | 59 | 17 |
| 11 | 3 | 3 | 15 | 57 | 1 | 16 | 27 | 47 | 0 | 23 | 3 | 44 | 0 | 9 | 53 | 13 |
| 12 | 3 | 11 | 44 | 40 | 1 | 20 | 41 | 14 | 0 | 25 | 9 | 32 | 0 | 10 | 47 | 8 |
| 13 | 3 | 20 | 13 | 23 | 1 | 24 | 54 | 40 | 0 | 27 | 15 | 20 | 0 | 11 | 41 | 4 |
| 14 | 3 | 28 | 42 | 7 | 1 | 29 | 8 | 6 | 0 | 29 | 21 | 7 | 0 | 12 | 35 | 0 |
| 15 | 4 | 7 | 10 | 50 | 2 | 3 | 21 | 32 | 1 | 1 | 26 | 55 | 0 | 13 | 28 | 55 |
| 16 | 4 | 15 | 39 | 33 | 2 | 7 | 34 | 58 | 1 | 3 | 32 | 43 | 0 | 14 | 22 | 51 |
| 17 | 4 | 24 | 8 | 17 | 2 | 11 | 48 | 24 | 1 | 5 | 38 | 30 | 0 | 15 | 16 | 47 |
| 18 | 5 | 2 | 37 | 0 | 2 | 16 | 1 | 51 | 1 | 7 | 44 | 18 | 0 | 16 | 10 | 42 |
| 19 | 5 | 11 | 5 | 43 | 2 | 20 | 15 | 17 | 1 | 9 | 50 | 6 | 0 | 17 | 4 | 38 |
| 20 | 5 | 19 | 34 | 27 | 2 | 24 | 28 | 43 | 1 | 11 | 55 | 53 | 0 | 17 | 58 | 34 |
| 21 | 5 | 28 | 3 | 10 | 2 | 28 | 42 | 9 | 1 | 14 | 1 | 41 | 0 | 18 | 52 | 29 |
| 22 | 6 | 6 | 31 | 53 | 3 | 2 | 55 | 35 | 1 | 16 | 7 | 28 | 0 | 19 | 46 | 25 |
| 23 | 6 | 15 | 0 | 37 | 3 | 7 | 9 | 1 | 1 | 18 | 13 | 16 | 0 | 20 | 40 | 21 |
| 24 | 6 | 23 | 29 | 20 | 3 | 11 | 22 | 28 | 1 | 20 | 19 | 3 | 0 | 21 | 34 | 16 |

# *MEDII MOTVS SATELLITVM IOVIS IN MINVTIS HORARIIS.*

| | *Primi* | | *Secundi* | | *Tertii* | | *Quarti* | | | *Primi* | | *Secundi* | | *Tertii* | | *Quarti* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| // | ' | '' ''' | ' | '' ''' | ' | '' ''' | '' ''' | | // | ' | '' ''' | ' | '' ''' | ' | '' ''' | '' ''' | |
| ' | °. | ' '' | °. | ' '' | °. | ' '' | ' '' | | ' | °. | ' '' | °. | ' '' | °. | ' '' | ' '' | |
| 1 | 0 | 8 29 | 0 | 4 13 | 0 | 2 6 | 0 54 | | 31 | 4 | 22 50 | 2 | 10 57 | 1 | 5 0 | 27 | 52 |
| 2 | 0 | 16 57 | 0 | 8 27 | 0 | 4 12 | 1 48 | | 32 | 4 | 31 19 | 2 | 15 10 | 1 | 7 6 | 28 | 46 |
| 3 | 0 | 25 26 | 0 | 12 40 | 0 | 6 17 | 2 42 | | 33 | 4 | 39 48 | 2 | 19 24 | 1 | 9 11 | 29 | 40 |
| 4 | 0 | 33 55 | 0 | 16 54 | 0 | 8 23 | 3 36 | | 34 | 4 | 48 17 | 2 | 23 37 | 1 | 11 17 | 30 | 33 |
| 5 | 0 | 42 24 | 0 | 21 7 | 0 | 10 29 | 4 30 | | 35 | 4 | 56 45 | 2 | 27 50 | 1 | 13 23 | 31 | 27 |
| 6 | 0 | 50 52 | 0 | 25 21 | 0 | 12 35 | 5 24 | | 36 | 5 | 5 14 | 2 | 32 4 | 1 | 15 29 | 32 | 21 |
| 7 | 0 | 59 21 | 0 | 29 34 | 0 | 14 41 | 6 18 | | 37 | 5 | 13 43 | 2 | 36 17 | 1 | 17 35 | 33 | 15 |
| 8 | 1 | 7 50 | 0 | 33 47 | 0 | 16 46 | 7 11 | | 38 | 5 | 22 11 | 2 | 40 31 | 1 | 19 40 | 34 | 9 |
| 9 | 1 | 16 18 | 0 | 38 1 | 0 | 18 52 | 8 5 | | 39 | 5 | 30 40 | 2 | 44 44 | 1 | 21 46 | 35 | 3 |
| 10 | 1 | 24 47 | 0 | 42 14 | 0 | 20 58 | 8 59 | | 40 | 5 | 39 9 | 2 | 48 57 | 1 | 23 52 | 35 | 57 |
| 11 | 1 | 33 16 | 0 | 46 28 | 0 | 23 4 | 9 53 | | 41 | 5 | 47 38 | 2 | 53 11 | 1 | 25 58 | 36 | 51 |
| 12 | 1 | 41 45 | 0 | 50 41 | 0 | 25 10 | 10 47 | | 42 | 5 | 56 6 | 2 | 57 24 | 1 | 28 4 | 37 | 45 |
| 13 | 1 | 50 13 | 0 | 54 55 | 0 | 27 15 | 11 41 | | 43 | 6 | 4 35 | 3 | 1 38 | 1 | 30 9 | 38 | 39 |
| 14 | 1 | 58 42 | 0 | 59 8 | 0 | 29 21 | 12 35 | | 44 | 6 | 13 4 | 3 | 5 51 | 1 | 32 15 | 39 | 33 |
| 15 | 2 | 7 11 | 1 | 3 22 | 0 | 31 27 | 13 29 | | 45 | 6 | 21 32 | 3 | 10 5 | 1 | 34 21 | 40 | 27 |
| 16 | 2 | 15 40 | 1 | 7 35 | 0 | 33 33 | 14 23 | | 46 | 6 | 30 1 | 3 | 14 18 | 1 | 36 27 | 41 | 21 |
| 17 | 2 | 24 8 | 1 | 11 48 | 0 | 35 39 | 15 17 | | 47 | 6 | 38 30 | 3 | 18 32 | 1 | 38 33 | 42 | 15 |
| 18 | 2 | 32 37 | 1 | 16 2 | 0 | 37 44 | 16 11 | | 48 | 6 | 46 59 | 3 | 22 45 | 1 | 40 38 | 43 | 9 |
| 19 | 2 | 41 6 | 1 | 20 15 | 0 | 39 50 | 17 5 | | 49 | 6 | 55 27 | 3 | 26 59 | 1 | 42 44 | 44 | 2 |
| 20 | 2 | 49 34 | 1 | 24 29 | 0 | 41 56 | 17 59 | | 50 | 7 | 3 56 | 3 | 31 12 | 1 | 44 50 | 44 | 56 |
| 21 | 2 | 58 3 | 1 | 28 42 | 0 | 44 2 | 18 52 | | 51 | 7 | 12 25 | 3 | 35 25 | 1 | 46 56 | 45 | 50 |
| 22 | 3 | 6 32 | 1 | 32 56 | 0 | 46 7 | 19 46 | | 52 | 7 | 20 54 | 3 | 39 39 | 1 | 49 2 | 46 | 44 |
| 23 | 3 | 15 1 | 1 | 37 9 | 0 | 48 13 | 20 40 | | 53 | 7 | 29 22 | 3 | 43 52 | 1 | 51 7 | 47 | 38 |
| 24 | 3 | 23 29 | 1 | 41 22 | 0 | 50 19 | 21 34 | | 54 | 7 | 37 51 | 3 | 48 6 | 1 | 53 13 | 48 | 32 |
| 25 | 3 | 31 58 | 1 | 45 36 | 0 | 52 25 | 22 28 | | 55 | 7 | 46 20 | 3 | 52 19 | 1 | 55 19 | 49 | 26 |
| 26 | 3 | 40 27 | 1 | 49 49 | 0 | 54 31 | 23 22 | | 56 | 7 | 54 48 | 3 | 56 32 | 1 | 57 25 | 50 | 20 |
| 27 | 3 | 48 55 | 1 | 54 3 | 0 | 56 37 | 24 16 | | 57 | 8 | 3 17 | 4 | 0 46 | 1 | 59 31 | 51 | 14 |
| 28 | 3 | 57 24 | 1 | 58 16 | 0 | 58 42 | 25 10 | | 58 | 8 | 11 46 | 4 | 4 59 | 2 | 1 36 | 52 | 8 |
| 29 | 4 | 5 53 | 2 | 2 30 | 1 | 0 48 | 26 4 | | 59 | 8 | 20 15 | 4 | 9 13 | 2 | 3 42 | 53 | 2 |
| 30 | 4 | 14 22 | 2 | 6 43 | 1 | 2 54 | 26 58 | | 60 | 8 | 28 43 | 4 | 13 26 | 2 | 5 48 | 53 | 56 |

# TABULA TEMPORIS MEDIO PRIMI SATELLITIS à JOVE MOTUI CONGRUENTIS.

| | Sig. 0. | | | | Sig. I. | | | Sig. II. | | | Sig. III. | | | Sig. IV. | | | Sig. V. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ″ | ″ | ‴ | | ″ | ″ | ‴ | | | | | | | | | | | | | |
| ′ | ′ | ″ | ‴ | ′ | ″ | ‴ | | | | | | | | | | | | | |
| o. | H | ′ | ″ | o. | H. | ′ | ″ | H. | ′ | ″ | H. | ′ | ″ | H. | ′ | ″ | H. | ′ | ″ |
| 0 | 0 | 0 | 0 | 30 | 3 | 32 | 23 | 7 | 4 | 46 | 10 | 37 | 9 | 14 | 9 | 32 | 17 | 41 | 55 |
| 1 | 0 | 7 | 5 | 31 | 3 | 39 | 28 | 7 | 11 | 51 | 10 | 44 | 14 | 14 | 16 | 37 | 17 | 49 | 0 |
| 2 | 0 | 14 | 10 | 32 | 3 | 46 | 33 | 7 | 18 | 56 | 10 | 51 | 19 | 14 | 23 | 42 | 17 | 56 | 5 |
| 3 | 0 | 21 | 14 | 33 | 3 | 53 | 37 | 7 | 26 | 0 | 10 | 58 | 23 | 14 | 30 | 46 | 18 | 3 | 9 |
| 4 | 0 | 28 | 19 | 34 | 4 | 0 | 42 | 7 | 33 | 5 | 11 | 5 | 28 | 14 | 37 | 51 | 18 | 10 | 14 |
| 5 | 0 | 35 | 24 | 35 | 4 | 7 | 47 | 7 | 40 | 10 | 11 | 12 | 33 | 14 | 44 | 56 | 18 | 17 | 19 |
| 6 | 0 | 42 | 29 | 36 | 4 | 14 | 52 | 7 | 47 | 15 | 11 | 19 | 38 | 14 | 52 | 1 | 18 | 24 | 24 |
| 7 | 0 | 49 | 33 | 37 | 4 | 21 | 56 | 7 | 54 | 19 | 11 | 26 | 42 | 14 | 59 | 5 | 18 | 31 | 28 |
| 8 | 0 | 56 | 38 | 38 | 4 | 29 | 1 | 8 | 1 | 24 | 11 | 33 | 47 | 15 | 6 | 10 | 18 | 38 | 33 |
| 9 | 1 | 3 | 43 | 39 | 4 | 36 | 6 | 8 | 8 | 29 | 11 | 40 | 52 | 15 | 13 | 15 | 18 | 45 | 38 |
| 10 | 1 | 10 | 48 | 40 | 4 | 43 | 11 | 8 | 15 | 34 | 11 | 47 | 57 | 15 | 20 | 20 | 18 | 52 | 43 |
| 11 | 1 | 17 | 52 | 41 | 4 | 50 | 15 | 8 | 22 | 38 | 11 | 55 | 1 | 15 | 27 | 24 | 18 | 59 | 47 |
| 12 | 1 | 24 | 57 | 42 | 4 | 57 | 20 | 8 | 29 | 43 | 12 | 2 | 6 | 15 | 34 | 29 | 19 | 6 | 52 |
| 13 | 1 | 32 | 2 | 43 | 5 | 4 | 25 | 8 | 36 | 48 | 12 | 9 | 11 | 15 | 41 | 34 | 19 | 13 | 57 |
| 14 | 1 | 39 | 7 | 44 | 5 | 11 | 30 | 8 | 43 | 53 | 12 | 16 | 16 | 15 | 48 | 39 | 19 | 21 | 2 |
| 15 | 1 | 46 | 12 | 45 | 5 | 18 | 35 | 8 | 50 | 58 | 12 | 23 | 21 | 15 | 55 | 44 | 19 | 28 | 7 |
| 16 | 1 | 53 | 16 | 46 | 5 | 25 | 39 | 8 | 58 | 2 | 12 | 30 | 25 | 16 | 2 | 48 | 19 | 35 | 11 |
| 17 | 2 | 0 | 21 | 47 | 5 | 32 | 44 | 9 | 5 | 7 | 12 | 37 | 30 | 16 | 9 | 53 | 19 | 42 | 16 |
| 18 | 2 | 7 | 26 | 48 | 5 | 39 | 49 | 9 | 12 | 12 | 12 | 44 | 35 | 16 | 16 | 58 | 19 | 49 | 21 |
| 19 | 2 | 14 | 31 | 49 | 5 | 46 | 54 | 9 | 19 | 17 | 12 | 51 | 40 | 16 | 24 | 3 | 19 | 56 | 26 |
| 20 | 2 | 21 | 35 | 50 | 5 | 53 | 58 | 9 | 26 | 21 | 12 | 58 | 44 | 16 | 31 | 7 | 20 | 3 | 30 |
| 21 | 2 | 28 | 40 | 51 | 6 | 1 | 3 | 9 | 33 | 26 | 13 | 5 | 49 | 16 | 38 | 12 | 20 | 10 | 35 |
| 22 | 2 | 35 | 45 | 52 | 6 | 8 | 8 | 9 | 40 | 31 | 13 | 12 | 54 | 16 | 45 | 17 | 20 | 17 | 40 |
| 23 | 2 | 42 | 50 | 53 | 6 | 15 | 13 | 9 | 47 | 36 | 13 | 19 | 59 | 16 | 52 | 22 | 20 | 24 | 45 |
| 24 | 2 | 49 | 54 | 54 | 6 | 22 | 17 | 9 | 54 | 40 | 13 | 27 | 3 | 16 | 59 | 26 | 20 | 31 | 49 |
| 25 | 2 | 56 | 59 | 55 | 6 | 29 | 22 | 10 | 1 | 45 | 13 | 34 | 8 | 17 | 6 | 31 | 20 | 38 | 54 |
| 26 | 3 | 4 | 4 | 56 | 6 | 36 | 27 | 10 | 8 | 50 | 13 | 41 | 13 | 17 | 13 | 36 | 20 | 45 | 59 |
| 27 | 3 | 11 | 9 | 57 | 6 | 43 | 32 | 10 | 15 | 55 | 13 | 48 | 18 | 17 | 20 | 41 | 20 | 53 | 4 |
| 28 | 3 | 18 | 13 | 58 | 6 | 50 | 36 | 10 | 22 | 59 | 13 | 55 | 22 | 17 | 27 | 45 | 21 | 0 | 8 |
| 29 | 3 | 25 | 18 | 59 | 6 | 57 | 41 | 10 | 30 | 4 | 14 | 2 | 27 | 17 | 34 | 50 | 21 | 7 | 13 |
| 30 | 3 | 32 | 23 | 60 | 7 | 4 | 46 | 10 | 37 | 9 | 14 | 9 | 32 | 17 | 41 | 55 | 21 | 14 | 18 |

# TABVLA TEMPORIS MEDIIS SATELLITVM SECVNDI, TERTII ET QVARTI MOTIBVS à IOVE CONGRVENTIS.

| | Secundi | | | Tertii | | | Quarti | | | | Secundi | | | Tertii | | | Quarti | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ″ | ‴ | | | ″ | ‴ | | ″ | ‴ | | | ″ | ‴ | | ″ | ‴ | | ″ | ‴ |
| | ′ | ″ | ‴ | | ′ | ″ | ‴ | ′ | ″ | ‴ | | ′ | ″ | ‴ | ′ | ″ | ‴ | ′ | ″ | ‴ |
| o. | H. | ′ | ″ | | H. | ′ | ″ | H. | ′ | ″ | o. | H. | ′ | ″ | H. | ′ | ″ | H. | ′ | ″ |
| 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 7 | 6 | 30 | 14 | 19 | 58 | 33 | 30 | 25 |
| 1 | 0 | 14 | 13 | | 0 | 28 | 40 | 1 | 7 | 1 | 31 | 7 | 20 | 43 | 14 | 48 | 38 | 34 | 37 | 26 |
| 2 | 0 | 28 | 26 | | 0 | 57 | 20 | 2 | 14 | 2 | 32 | 7 | 34 | 56 | 15 | 17 | 18 | 35 | 44 | 27 |
| 3 | 0 | 42 | 39 | | 1 | 26 | 0 | 3 | 21 | 3 | 33 | 7 | 49 | 9 | 15 | 45 | 58 | 36 | 51 | 28 |
| 4 | 0 | 56 | 52 | | 1 | 54 | 40 | 4 | 28 | 3 | 34 | 8 | 3 | 22 | 16 | 14 | 38 | 37 | 58 | 28 |
| 5 | 1 | 11 | 5 | | 2 | 23 | 20 | 5 | 35 | 4 | 35 | 8 | 17 | 35 | 16 | 43 | 18 | 39 | 5 | 29 |
| 6 | 1 | 25 | 18 | | 2 | 52 | 0 | 6 | 42 | 5 | 36 | 8 | 31 | 48 | 17 | 11 | 58 | 40 | 12 | 30 |
| 7 | 1 | 39 | 31 | | 3 | 20 | 40 | 7 | 49 | 6 | 37 | 8 | 46 | 1 | 17 | 40 | 38 | 41 | 19 | 31 |
| 8 | 1 | 53 | 44 | | 3 | 49 | 19 | 8 | 56 | 7 | 38 | 9 | 0 | 14 | 18 | 9 | 17 | 42 | 26 | 32 |
| 9 | 2 | 7 | 57 | | 4 | 17 | 59 | 10 | 3 | 8 | 39 | 9 | 14 | 27 | 18 | 37 | 57 | 43 | 33 | 33 |
| 10 | 2 | 22 | 10 | | 4 | 46 | 39 | 11 | 10 | 8 | 40 | 9 | 28 | 40 | 19 | 6 | 37 | 44 | 40 | 33 |
| 11 | 2 | 36 | 23 | | 5 | 15 | 19 | 12 | 17 | 9 | 41 | 9 | 42 | 53 | 19 | 35 | 17 | 45 | 47 | 34 |
| 12 | 2 | 50 | 36 | | 5 | 43 | 59 | 13 | 24 | 10 | 42 | 9 | 57 | 6 | 20 | 3 | 57 | 46 | 54 | 35 |
| 13 | 3 | 4 | 49 | | 6 | 12 | 39 | 14 | 31 | 11 | 43 | 10 | 11 | 19 | 20 | 32 | 37 | 48 | 1 | 36 |
| 14 | 3 | 19 | 2 | | 6 | 41 | 19 | 15 | 38 | 12 | 44 | 10 | 25 | 31 | 21 | 1 | 17 | 49 | 8 | 37 |
| 15 | 3 | 33 | 15 | | 7 | 9 | 59 | 16 | 45 | 13 | 45 | 10 | 39 | 44 | 21 | 29 | 57 | 50 | 15 | 38 |
| 16 | 3 | 47 | 28 | | 7 | 38 | 39 | 17 | 52 | 13 | 46 | 10 | 53 | 57 | 21 | 58 | 37 | 51 | 22 | 38 |
| 17 | 4 | 1 | 41 | | 8 | 7 | 19 | 18 | 59 | 14 | 47 | 11 | 8 | 10 | 22 | 27 | 17 | 52 | 29 | 39 |
| 18 | 4 | 15 | 54 | | 8 | 35 | 59 | 20 | 6 | 15 | 48 | 11 | 22 | 23 | 22 | 55 | 57 | 53 | 36 | 40 |
| 19 | 4 | 30 | 7 | | 9 | 4 | 39 | 21 | 13 | 16 | 49 | 11 | 36 | 36 | 23 | 24 | 37 | 54 | 43 | 41 |
| 20 | 4 | 44 | 20 | | 9 | 33 | 19 | 22 | 20 | 17 | 50 | 11 | 50 | 49 | 23 | 53 | 17 | 55 | 50 | 42 |
| 21 | 4 | 58 | 33 | | 10 | 1 | 59 | 23 | 27 | 18 | 51 | 12 | 5 | 2 | 24 | 21 | 57 | 56 | 57 | 43 |
| 22 | 5 | 12 | 46 | | 10 | 30 | 39 | 24 | 34 | 18 | 52 | 12 | 19 | 15 | 24 | 50 | 37 | 58 | 4 | 43 |
| 23 | 5 | 26 | 59 | | 10 | 59 | 18 | 25 | 41 | 19 | 53 | 12 | 33 | 28 | 25 | 19 | 16 | 59 | 11 | 44 |
| 24 | 5 | 41 | 12 | | 11 | 27 | 58 | 26 | 48 | 20 | 54 | 12 | 47 | 41 | 25 | 47 | 56 | 60 | 18 | 45 |
| 25 | 5 | 55 | 25 | | 11 | 56 | 38 | 27 | 55 | 21 | 55 | 13 | 1 | 54 | 26 | 16 | 36 | 61 | 25 | 46 |
| 26 | 6 | 9 | 38 | | 12 | 25 | 18 | 29 | 2 | 22 | 56 | 13 | 16 | 7 | 26 | 45 | 16 | 62 | 32 | 47 |
| 27 | 6 | 23 | 51 | | 12 | 53 | 58 | 30 | 9 | 23 | 57 | 13 | 30 | 20 | 27 | 13 | 56 | 63 | 39 | 48 |
| 28 | 6 | 38 | 4 | | 13 | 22 | 38 | 31 | 16 | 23 | 58 | 13 | 44 | 33 | 27 | 42 | 36 | 64 | 46 | 48 |
| 29 | 6 | 52 | 17 | | 13 | 51 | 18 | 32 | 23 | 24 | 59 | 13 | 58 | 46 | 28 | 11 | 16 | 65 | 53 | 49 |
| 30 | 7 | 6 | 30 | | 14 | 19 | 58 | 33 | 30 | 25 | 60 | 14 | 12 | 59 | 28 | 39 | 56 | 67 | 0 | 50 |

# Jovis a Nodo Satellitum Distantia.

| Gr. | Sig. O. VI. Sat. Primi H. | ′ | ″ | Secundi H. | ′ | ″ | Sig. I. VII. Primi H. | ′ | ″ | Secundi H. | ′ | ″ | Sig. II. VIII. Primi H. | ′ | ″ | Secundi H. | ′ | ″ | Gr. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 8 | 30 | 1 | 27 | 0 | 1 | 7 | 24 | 1 | 24 | 25 | 1 | 5 | 9 | 1 | 18 | 53 | 30 |
| 1 | 1 | 8 | 29 | 1 | 26 | 59 | 1 | 7 | 20 | 1 | 24 | 15 | 1 | 5 | 5 | 1 | 18 | 43 | 29 |
| 2 | 1 | 8 | 29 | 1 | 26 | 59 | 1 | 7 | 15 | 1 | 24 | 5 | 1 | 5 | 1 | 1 | 18 | 33 | 28 |
| 3 | 1 | 8 | 28 | 1 | 26 | 58 | 1 | 7 | 11 | 1 | 23 | 55 | 1 | 4 | 57 | 1 | 18 | 23 | 27 |
| 4 | 1 | 8 | 28 | 1 | 26 | 57 | 1 | 7 | 7 | 1 | 23 | 44 | 1 | 4 | 53 | 1 | 18 | 14 | 26 |
| 5 | 1 | 8 | 27 | 1 | 26 | 56 | 1 | 7 | 3 | 1 | 23 | 34 | 1 | 4 | 49 | 1 | 18 | 5 | 25 |
| 6 | 1 | 8 | 27 | 1 | 26 | 54 | 1 | 6 | 59 | 1 | 23 | 23 | 1 | 4 | 46 | 1 | 17 | 56 | 24 |
| 7 | 1 | 8 | 26 | 1 | 26 | 52 | 1 | 6 | 55 | 1 | 23 | 12 | 1 | 4 | 42 | 1 | 17 | 47 | 23 |
| 8 | 1 | 8 | 25 | 1 | 26 | 49 | 1 | 6 | 50 | 1 | 23 | 0 | 1 | 4 | 39 | 1 | 17 | 38 | 22 |
| 9 | 1 | 8 | 24 | 1 | 26 | 46 | 1 | 6 | 46 | 1 | 22 | 49 | 1 | 4 | 35 | 1 | 17 | 30 | 21 |
| 10 | 1 | 8 | 22 | 1 | 26 | 43 | 1 | 6 | 41 | 1 | 22 | 38 | 1 | 4 | 32 | 1 | 17 | 22 | 20 |
| 11 | 1 | 8 | 21 | 1 | 26 | 40 | 1 | 6 | 36 | 1 | 22 | 27 | 1 | 4 | 29 | 1 | 17 | 14 | 19 |
| 12 | 1 | 8 | 19 | 1 | 26 | 36 | 1 | 6 | 31 | 1 | 22 | 16 | 1 | 4 | 26 | 1 | 17 | 6 | 18 |
| 13 | 1 | 8 | 17 | 1 | 26 | 31 | 1 | 6 | 26 | 1 | 22 | 5 | 1 | 4 | 23 | 1 | 16 | 59 | 17 |
| 14 | 1 | 8 | 15 | 1 | 26 | 26 | 1 | 6 | 21 | 1 | 21 | 53 | 1 | 4 | 20 | 1 | 16 | 53 | 16 |
| 15 | 1 | 8 | 13 | 1 | 26 | 20 | 1 | 6 | 16 | 1 | 21 | 42 | 1 | 4 | 17 | 1 | 16 | 47 | 15 |
| 16 | 1 | 8 | 11 | 1 | 26 | 14 | 1 | 6 | 12 | 1 | 21 | 30 | 1 | 4 | 15 | 1 | 16 | 41 | 14 |
| 17 | 1 | 8 | 8 | 1 | 26 | 8 | 1 | 6 | 7 | 1 | 21 | 19 | 1 | 4 | 12 | 1 | 16 | 36 | 13 |
| 18 | 1 | 8 | 5 | 1 | 26 | 2 | 1 | 6 | 3 | 1 | 21 | 7 | 1 | 4 | 10 | 1 | 16 | 31 | 12 |
| 19 | 1 | 8 | 3 | 1 | 25 | 56 | 1 | 5 | 58 | 1 | 20 | 56 | 1 | 4 | 8 | 1 | 16 | 26 | 11 |
| 20 | 1 | 8 | 0 | 1 | 25 | 49 | 1 | 5 | 54 | 1 | 20 | 44 | 1 | 4 | 7 | 1 | 16 | 22 | 10 |
| 21 | 1 | 7 | 57 | 1 | 25 | 42 | 1 | 5 | 49 | 1 | 20 | 33 | 1 | 4 | 6 | 1 | 16 | 18 | 9 |
| 22 | 1 | 7 | 54 | 1 | 25 | 34 | 1 | 5 | 45 | 1 | 20 | 21 | 1 | 4 | 5 | 1 | 16 | 14 | 8 |
| 23 | 1 | 7 | 51 | 1 | 25 | 26 | 1 | 5 | 40 | 1 | 20 | 10 | 1 | 4 | 4 | 1 | 16 | 11 | 7 |
| 24 | 1 | 7 | 47 | 1 | 25 | 19 | 1 | 5 | 35 | 1 | 19 | 58 | 1 | 4 | 3 | 1 | 16 | 8 | 6 |
| 25 | 1 | 7 | 44 | 1 | 25 | 11 | 1 | 5 | 30 | 1 | 19 | 47 | 1 | 4 | 3 | 1 | 16 | 5 | 5 |
| 26 | 1 | 7 | 41 | 1 | 25 | 2 | 1 | 5 | 26 | 1 | 19 | 36 | 1 | 4 | 2 | 1 | 16 | 3 | 4 |
| 27 | 1 | 7 | 37 | 1 | 24 | 53 | 1 | 5 | 21 | 1 | 19 | 25 | 1 | 4 | 2 | 1 | 16 | 2 | 3 |
| 28 | 1 | 7 | 33 | 1 | 24 | 44 | 1 | 5 | 17 | 1 | 19 | 14 | 1 | 4 | 1 | 1 | 16 | 1 | 2 |
| 29 | 1 | 7 | 29 | 1 | 24 | 35 | 1 | 5 | 13 | 1 | 19 | 3 | 1 | 4 | 0 | 1 | 16 | 0 | 1 |
| 30 | 1 | 7 | 24 | 1 | 24 | 25 | 1 | 5 | 9 | 1 | 18 | 53 | 1 | 4 | 0 | 1 | 16 | 0 | 0 |
| | Sig. XI. V. | | | | | | Sig. X. IV. | | | | | | Sig. IX. III. | | | | | | |

## Jovis a Nodo Satellitum Distantia

| Sig. O. VI. | | | | | | Sig. I. VII. | | | | | | Sig. II. VIII. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gr. | Sat. Tertii | | | Quarti | | Tertii | | | Quarti | | | Tertii | | | Gr. |
| | H. | ′ | ″ | H. | ′ | ″ | H. | ′ | ″ | H. | ′ | ″ | H. | ′ | ″ | |
| 0 | 1 | 48 | 0 | 2 | 23 | 0 | 1 | 39 | 1 | 1 | 50 | 41 | 1 | 18 | 0 | 30 |
| 1 | 1 | 47 | 59 | 2 | 22 | 56 | 1 | 38 | 26 | 1 | 48 | 25 | 1 | 17 | 17 | 29 |
| 2 | 1 | 47 | 57 | 2 | 22 | 49 | 1 | 37 | 51 | 1 | 46 | 2 | 1 | 16 | 35 | 28 |
| 3 | 1 | 47 | 53 | 2 | 22 | 38 | 1 | 37 | 15 | 1 | 43 | 33 | 1 | 15 | 53 | 27 |
| 4 | 1 | 47 | 49 | 2 | 22 | 24 | 1 | 36 | 38 | 1 | 40 | 58 | 1 | 15 | 12 | 26 |
| 5 | 1 | 47 | 43 | 2 | 22 | 5 | 1 | 36 | 0 | 1 | 38 | 17 | 1 | 14 | 31 | 25 |
| 6 | 1 | 47 | 37 | 2 | 21 | 42 | 1 | 35 | 22 | 1 | 35 | 30 | 1 | 13 | 52 | 24 |
| 7 | 1 | 47 | 29 | 2 | 21 | 15 | 1 | 34 | 43 | 1 | 32 | 36 | 1 | 13 | 14 | 23 |
| 8 | 1 | 47 | 20 | 2 | 20 | 44 | 1 | 34 | 3 | 1 | 29 | 34 | 1 | 12 | 36 | 22 |
| 9 | 1 | 47 | 9 | 2 | 20 | 8 | 1 | 33 | 22 | 1 | 26 | 24 | 1 | 11 | 59 | 21 |
| 10 | 1 | 46 | 57 | 2 | 19 | 28 | 1 | 32 | 41 | 1 | 23 | 5 | 1 | 11 | 23 | 20 |
| 11 | 1 | 46 | 44 | 2 | 18 | 44 | 1 | 31 | 59 | 1 | 19 | 37 | 1 | 10 | 48 | 19 |
| 12 | 1 | 46 | 30 | 2 | 17 | 55 | 1 | 31 | 17 | 1 | 15 | 58 | 1 | 10 | 15 | 18 |
| 13 | 1 | 46 | 14 | 2 | 17 | 2 | 1 | 30 | 35 | 1 | 12 | 8 | 1 | 9 | 44 | 17 |
| 14 | 1 | 45 | 58 | 2 | 16 | 5 | 1 | 29 | 52 | 1 | 8 | 4 | 1 | 9 | 14 | 16 |
| 15 | 1 | 45 | 40 | 2 | 15 | 4 | 1 | 29 | 8 | 1 | 3 | 43 | 1 | 8 | 45 | 15 |
| 16 | 1 | 45 | 22 | 2 | 13 | 58 | 1 | 28 | 24 | 0 | 59 | 4 | 1 | 8 | 18 | 14 |
| 17 | 1 | 45 | 2 | 2 | 12 | 48 | 1 | 27 | 40 | 0 | 54 | 0 | 1 | 7 | 52 | 13 |
| 18 | 1 | 44 | 41 | 2 | 11 | 34 | 1 | 26 | 55 | 0 | 48 | 26 | 1 | 7 | 28 | 12 |
| 19 | 1 | 44 | 18 | 2 | 10 | 15 | 1 | 26 | 10 | 0 | 42 | 12 | 1 | 7 | 5 | 11 |
| 20 | 1 | 43 | 55 | 2 | 8 | 52 | 1 | 25 | 25 | 0 | 34 | 53 | 1 | 6 | 44 | 10 |
| 21 | 1 | 43 | 30 | 2 | 7 | 25 | 1 | 24 | 40 | 0 | 25 | 36 | 1 | 6 | 25 | 9 |
| 22 | 1 | 43 | 4 | 2 | 5 | 53 | 1 | 23 | 56 | 0 | 9 | 47 | 1 | 6 | 8 | 8 |
| 23 | 1 | 42 | 37 | 2 | 4 | 16 | 1 | 23 | 11 | 0 | 0 | 0 | 1 | 5 | 53 | 7 |
| 24 | 1 | 42 | 9 | 2 | 2 | 34 | 1 | 22 | 26 | | | | 1 | 5 | 40 | 6 |
| 25 | 1 | 41 | 40 | 2 | 0 | 48 | 1 | 21 | 41 | | | | 1 | 5 | 28 | 5 |
| 26 | 1 | 41 | 10 | 1 | 58 | 56 | 1 | 20 | 56 | | | | 1 | 5 | 18 | 4 |
| 27 | 1 | 40 | 39 | 1 | 57 | 0 | 1 | 20 | 12 | | | | 1 | 5 | 10 | 3 |
| 28 | 1 | 40 | 8 | 1 | 54 | 59 | 1 | 19 | 28 | | | | 1 | 5 | 5 | 2 |
| 29 | 1 | 39 | 35 | 1 | 52 | 52 | 1 | 18 | 44 | | | | 1 | 5 | 2 | 1 |
| 30 | 1 | 39 | 1 | 1 | 50 | 41 | 1 | 18 | 0 | | | | 1 | 5 | 0 | 0 |
| Sig. XI. V. | | | | | | Sig. X. IV. | | | | | | Sig. IX. III. | | | | |

## ÆQUATIONES LUMINIS ADDENDÆ.

*Solis à Loco Jovis Heliocentrico Distantia.*

| Gr. | Sig. o. | | I. | | II. | | III. | | IV. | | V. | | Gr. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ′ | ″ | ′ | ″ | ′ | ″ | ′ | ″ | ′ | ″ | ′ | ″ | |
| 0 | 0 | 0 | 13 | 12 | 10 | 59 | 7 | 41 | 4 | 5 | 1 | 8 | 30 |
| 1 | 14 | 0 | 13 | 9 | 10 | 53 | 7 | 34 | 3 | 58 | 1 | 4 | 29 |
| 2 | 13 | 59 | 13 | 6 | 10 | 47 | 7 | 27 | 3 | 51 | 1 | 0 | 28 |
| 3 | 13 | 59 | 13 | 3 | 10 | 41 | 7 | 20 | 3 | 44 | 0 | 56 | 27 |
| 4 | 13 | 59 | 13 | 0 | 10 | 35 | 7 | 13 | 3 | 37 | 0 | 52 | 26 |
| 5 | 13 | 58 | 12 | 56 | 10 | 29 | 7 | 5 | 3 | 31 | 0 | 48 | 25 |
| 6 | 13 | 58 | 12 | 52 | 10 | 23 | 6 | 58 | 3 | 24 | 0 | 44 | 24 |
| 7 | 13 | 57 | 12 | 48 | 10 | 17 | 6 | 51 | 3 | 17 | 0 | 40 | 23 |
| 8 | 13 | 56 | 12 | 44 | 10 | 11 | 6 | 44 | 3 | 10 | 0 | 37 | 22 |
| 9 | 13 | 55 | 12 | 40 | 10 | 4 | 6 | 36 | 3 | 3 | 0 | 34 | 21 |
| 10 | 13 | 54 | 12 | 36 | 9 | 57 | 6 | 28 | 2 | 57 | 0 | 31 | 20 |
| 11 | 13 | 53 | 12 | 32 | 9 | 51 | 6 | 20 | 2 | 50 | 0 | 28 | 19 |
| 12 | 13 | 52 | 12 | 28 | 9 | 45 | 6 | 13 | 2 | 44 | 0 | 25 | 18 |
| 13 | 13 | 51 | 12 | 24 | 9 | 39 | 6 | 6 | 2 | 38 | 0 | 22 | 17 |
| 14 | 13 | 50 | 12 | 20 | 9 | 32 | 5 | 59 | 2 | 32 | 0 | 19 | 16 |
| 15 | 13 | 48 | 12 | 15 | 9 | 25 | 5 | 52 | 2 | 26 | 0 | 17 | 15 |
| 16 | 13 | 46 | 12 | 11 | 9 | 19 | 5 | 44 | 2 | 20 | 0 | 15 | 14 |
| 17 | 13 | 44 | 12 | 6 | 9 | 13 | 5 | 37 | 2 | 14 | 0 | 13 | 13 |
| 18 | 13 | 42 | 12 | 1 | 9 | 6 | 5 | 30 | 2 | 8 | 0 | 11 | 12 |
| 19 | 13 | 40 | 11 | 56 | 8 | 59 | 5 | 23 | 2 | 3 | 0 | 9 | 11 |
| 20 | 13 | 38 | 11 | 51 | 8 | 52 | 5 | 16 | 1 | 58 | 0 | 7 | 10 |
| 21 | 13 | 37 | 11 | 46 | 8 | 45 | 5 | 8 | 1 | 52 | 0 | 6 | 9 |
| 22 | 13 | 35 | 11 | 41 | 8 | 38 | 5 | 1 | 1 | 47 | 0 | 5 | 8 |
| 23 | 13 | 33 | 11 | 36 | 8 | 31 | 4 | 54 | 1 | 42 | 0 | 4 | 7 |
| 24 | 13 | 30 | 11 | 31 | 8 | 24 | 4 | 47 | 1 | 37 | 0 | 3 | 6 |
| 25 | 13 | 27 | 11 | 26 | 8 | 17 | 4 | 40 | 1 | 32 | 0 | 2 | 5 |
| 26 | 13 | 24 | 11 | 21 | 8 | 10 | 4 | 33 | 1 | 27 | 0 | 2 | 4 |
| 27 | 13 | 21 | 11 | 16 | 8 | 3 | 4 | 26 | 1 | 22 | 0 | 1 | 3 |
| 28 | 13 | 18 | 11 | 11 | 7 | 56 | 4 | 19 | 1 | 17 | 0 | 1 | 2 |
| 29 | 13 | 15 | 11 | 5 | 7 | 49 | 4 | 12 | 1 | 12 | 0 | 0 | 1 |
| 30 | 13 | 22 | 10 | 59 | 7 | 41 | 4 | 5 | 1 | 8 | 0 | 0 | 0 |
| Sig. | XI. | | X. | | IX. | | VIII. | | VII. | | VI. | | |

## ÆQUATIONUM LUMINIS CORRECTIONES.

| *Locus Jovis Heliocentricus.* | *Correctiones Addendæ.* | *Locus Jovis Heliocentricus.* |
|---|---|---|
| *S* o | ′ ″ | *S* o |
| 0 10 | 0 0 | 0 10 |
| 0 20 | 0 2 | 0 0 |
| 1 0 | 0 6 | 11 20 |
| 1 10 | 0 13 | 11 10 |
| 1 20 | 0 23 | 11 0 |
| 2 0 | 0 35 | 10 20 |
| 2 10 | 0 49 | 10 10 |
| 2 20 | 1 5 | 10 0 |
| 3 0 | 1 22 | 9 20 |
| 3 10 | 1 40 | 9 10 |
| 3 20 | 1 58 | 9 0 |
| 4 0 | 2 17 | 8 20 |
| 4 10 | 2 34 | 8 10 |
| 4 20 | 2 50 | 8 0 |
| 5 0 | 3 4 | 7 20 |
| 5 10 | 3 15 | 7 10 |
| 5 20 | 3 24 | 7 0 |
| 6 0 | 3 29 | 6 20 |
| 6 10 | 3 30 | 6 10 |

*Quoniam Experimento constat ſerius accidere Satellitum Eclipſes, quo major eſt* Jovis *diſtantia a* Terrâ, *ac proinde Lucem non niſi motu progreſſivo propagari; itaq; Tabellam hanc* Correctionis Æquationum Luminis *adjecimus, è qua augmenta earum ab Eccentricitate Planetæ orta capienda ſunt.*

*Distantiæ apparentes Satellitum a Centro Jovis in Semidiametris Jovis & Semidiametri Centesimis.*

*Satellitum a Loco Jovis Geocentrico Distantiæ.*

| Sig. O. Or. VI. Occ. | | | | | Sig. I. Or. VII. Occ. | | | | | Sig. II. Or. VIII. Occ. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Distantia Satellitis.* | | | | | *Distantia Satellitis.* | | | | | *Distantia Satellitis.* | | | | |
| *Gr.* | I. | II. | III. | IV. | I. | II. | III. | IV. | | I. | II. | III. | IV. | *Gr* |
| | *Semid.* | *Semid.* | *Semid.* | *Semid.* | *Semid.* | *Semid.* | *Semid.* | *Semid.* | | *Semid.* | *Semid.* | *Semid.* | *Semid.* | |
| 0 | 0, 0 | 0, 0 | 0, 0 | 0, 0 | 2,95 | 4,70 | 7,50 | 13,19 | | 5,12 | 8,14 | 12 99 | 22,85 | 30 |
| 1 | 0,10 | 0,16 | 0,26 | 0,46 | 3,04 | 4,84 | 7,73 | 13,59 | | 5,17 | 8,22 | 13,12 | 23,07 | 29 |
| 2 | 0,21 | 0,33 | 0,52 | 0,92 | 3,13 | 4,98 | 7,95 | 13,98 | | 5,22 | 8,30 | 13,24 | 23,29 | 28 |
| 3 | 0,31 | 0,49 | 0,78 | 1,38 | 3,22 | 5,12 | 8,17 | 14,37 | | 5,27 | 8,38 | 13,36 | 23,51 | 27 |
| 4 | 0,41 | 0,66 | 1,05 | 1,84 | 3,30 | 5,26 | 8,39 | 14,75 | | 5,31 | 8,45 | 13,48 | 23,71 | 26 |
| 5 | 0,51 | 0,82 | 1,31 | 2,30 | 3,39 | 5,39 | 8,60 | 15,13 | | 5,36 | 8,52 | 13,59 | 23,91 | 25 |
| 6 | 0,62 | 0,98 | 1,57 | 2,76 | 3,47 | 5,53 | 8,82 | 15,51 | | 5,40 | 8,59 | 13,70 | 24,10 | 24 |
| 7 | 0,72 | 1,14 | 1,83 | 3,22 | 3,56 | 5,66 | 9,03 | 15,88 | | 5,44 | 8,66 | 13,81 | 24,28 | 23 |
| 8 | 0,82 | 1,31 | 2,09 | 3,67 | 3,64 | 5,79 | 9,24 | 16,24 | | 5,48 | 8,72 | 13,91 | 24,46 | 22 |
| 9 | 0,92 | 1,47 | 2,34 | 4,13 | 3,72 | 5,92 | 9,44 | 16,60 | | 5,52 | 8,78 | 14,00 | 24,63 | 21 |
| 10 | 1,03 | 1,63 | 2,60 | 4,58 | 3,80 | 6,04 | 9,64 | 16,96 | | 5,55 | 8,84 | 14,10 | 24,79 | 20 |
| 11 | 1,13 | 1,79 | 2,86 | 5,03 | 3,87 | 6,17 | 9,84 | 17,31 | | 5,59 | 8,89 | 14,18 | 24,95 | 19 |
| 12 | 1,23 | 1,95 | 3,11 | 5,48 | 3,95 | 6,29 | 10,04 | 17,65 | | 5,62 | 8,94 | 14,27 | 25,09 | 18 |
| 13 | 1,33 | 2,12 | 3,37 | 5,93 | 4,03 | 6,41 | 10,23 | 17,99 | | 5,65 | 8,99 | 14,34 | 25,23 | 17 |
| 14 | 1,43 | 2,27 | 3,63 | 6,38 | 4,10 | 6,53 | 10,42 | 18,32 | | 5,68 | 9,04 | 14,42 | 25,36 | 16 |
| 15 | 1,53 | 2,43 | 3,88 | 6,83 | 4,18 | 6,65 | 10,61 | 18,65 | | 5,71 | 9,08 | 14,49 | 25,48 | 15 |
| 16 | 1,63 | 2,59 | 4,13 | 7,27 | 4,25 | 6,76 | 10,79 | 18,98 | | 5,73 | 9,12 | 14,56 | 25,60 | 14 |
| 17 | 1,73 | 2,75 | 4,38 | 7,71 | 4,32 | 6,88 | 10,98 | 19,30 | | 5,76 | 9,16 | 14,62 | 25,71 | 13 |
| 18 | 1,83 | 2,91 | 4,63 | 8,15 | 4,39 | 6,99 | 11,15 | 19,61 | | 5,78 | 9,20 | 14,67 | 25,81 | 12 |
| 19 | 1,92 | 3,06 | 4,88 | 8,59 | 4,46 | 7,09 | 11,32 | 19,91 | | 5,80 | 9,23 | 14,72 | 25,90 | 11 |
| 20 | 2,02 | 3,22 | 5,13 | 9,02 | 4,53 | 7,20 | 11,49 | 20,21 | | 5,82 | 9,26 | 14,77 | 25,98 | 10 |
| 21 | 2,12 | 3,37 | 5,37 | 9,45 | 4,59 | 7,31 | 11,66 | 20,50 | | 5,83 | 9,29 | 14,81 | 26,06 | 9 |
| 22 | 2,22 | 3,52 | 5,62 | 9,88 | 4,66 | 7,41 | 11,82 | 20,79 | | 5,85 | 9,31 | 14,85 | 26,13 | 8 |
| 23 | 2,31 | 3,67 | 5,86 | 10,31 | 4,72 | 7,51 | 11,98 | 21,07 | | 5,87 | 9,33 | 14,89 | 26,19 | 7 |
| 24 | 2,40 | 3,82 | 5,11 | 10,73 | 4,78 | 7,61 | 12,14 | 21,34 | | 5,88 | 9,35 | 14,92 | 26,24 | 6 |
| 25 | 2,50 | 3,97 | 6,34 | 11,15 | 4,84 | 7,70 | 12,29 | 21,61 | | 5,89 | 9,37 | 14,94 | 26,28 | 5 |
| 26 | 2,59 | 4,12 | 6,57 | 11,57 | 4,90 | 7,80 | 12,44 | 21,87 | | 5,89 | 9,38 | 14,96 | 26,32 | 4 |
| 27 | 2,68 | 4,27 | 6,81 | 11,98 | 4,96 | 7,89 | 12,58 | 22,13 | | 5,90 | 9,39 | 14,98 | 26,35 | 3 |
| 28 | 2,77 | 4,41 | 7,04 | 12,39 | 5,01 | 7,97 | 12,72 | 22,37 | | 5,91 | 9,40 | 14,99 | 26,37 | 2 |
| 29 | 2,86 | 4,56 | 7,27 | 12,79 | 5,07 | 8,06 | 12,86 | 22,61 | | 5,91 | 9,40 | 15,00 | 26,38 | 1 |
| 30 | 2,95 | 4,70 | 7,50 | 13,19 | 5,12 | 8,14 | 12,99 | 22,85 | | 5,91 | 9,40 | 15,00 | 26,38 | 0 |
| Sig. XI. Occ. V. Or. | | | | | Sig. X. Occ. IV. Or. | | | | | Sig. IX. Occ. III. Or. | | | | |

# TABULA LATITUDINARIA SATELLITUM JOVIS.

| Argument. Latitudinis. | Sig. 0. *Bor.* 6. *Aust.* Inclinatio. Satellitum I. II. III. | Inclinatio. Satellitis IV. | Reduct. Subtr. | Sig. 1. *Bor.* 7. *Aust.* Inclinatio. Satellitum I. II. III. | Inclinatio. Satellitis IV. | Reduct. Subtr. | Sig. 2. *Bor.* 8. *Aust.* Inclinatio. Satellitum I. II. III. | Inclinatio. Satellitis IV. | Reduct. Subtr. | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Gr.* | ° ′ ″ | ° ′ ″ | ′ ″ | ° ′ ″ | ° ′ ″ | ′ ″ | ° ′ ″ | ° ′ ″ | ′ ″ | |
| 0 | 0 0 0 | 0 0 0 | 0 0 | 1 27 28 | 1 20 58 | 1 44 | 2 31 32 | 2 20 16 | 1 44 | 30 |
| 1 | 0 3 3 | 0 2 50 | 0 4 | 1 30 6 | 1 23 24 | 1 46 | 2 33 2 | 2 21 40 | 1 42 | 29 |
| 2 | 0 6 6 | 0 5 39 | 0 8 | 1 32 42 | 1 25 49 | 1 48 | 2 34 30 | 2 23 1 | 1 40 | 28 |
| 3 | 0 9 9 | 0 8 28 | 0 13 | 1 35 17 | 1 28 12 | 1 50 | 2 35 54 | 2 24 20 | 1 38 | 27 |
| 4 | 0 12 12 | 0 11 18 | 0 17 | 1 37 50 | 1 30 34 | 1 51 | 2 37 16 | 2 25 36 | 1 35 | 26 |
| 5 | 0 15 14 | 0 14 7 | 0 21 | 1 40 21 | 1 32 54 | 1 53 | 2 38 35 | 2 26 49 | 1 32 | 25 |
| 6 | 0 18 17 | 0 16 56 | 0 25 | 1 42 50 | 1 35 12 | 1 54 | 2 39 51 | 2 27 59 | 1 29 | 24 |
| 7 | 0 21 19 | 0 19 44 | 0 29 | 1 45 17 | 1 37 28 | 1 56 | 2 41 4 | 2 29 7 | 1 26 | 23 |
| 8 | 0 24 21 | 0 22 32 | 0 33 | 1 47 42 | 1 39 43 | 1 57 | 2 42 15 | 2 30 12 | 1 23 | 22 |
| 9 | 0 27 22 | 0 25 20 | 0 37 | 1 50 6 | 1 41 55 | 1 58 | 2 43 22 | 2 31 14 | 1 20 | 21 |
| 10 | 0 30 22 | 0 28 7 | 0 41 | 1 52 28 | 1 44 6 | 1 59 | 2 44 26 | 2 32 13 | 1 17 | 20 |
| 11 | 0 33 23 | 0 30 54 | 0 45 | 1 54 47 | 1 46 16 | 1 59 | 2 45 27 | 2 33 10 | 1 14 | 19 |
| 12 | 0 36 22 | 0 33 40 | 0 49 | 1 57 4 | 1 48 23 | 2 0 | 2 46 25 | 2 34 4 | 1 11 | 18 |
| 13 | 0 39 21 | 0 36 26 | 0 53 | 1 59 19 | 1 50 28 | 2 0 | 2 47 20 | 2 34 55 | 1 8 | 17 |
| 14 | 0 42 19 | 0 39 11 | 0 56 | 2 1 32 | 1 52 31 | 2 0 | 2 48 13 | 2 35 43 | 1 4 | 16 |
| 15 | 0 45 16 | 0 41 55 | 1 0 | 2 3 43 | 1 54 32 | 2 0 | 2 49 2 | 2 36 28 | 1 0 | 15 |
| 16 | 0 48 13 | 0 44 38 | 1 4 | 2 5 51 | 1 56 31 | 2 0 | 2 49 47 | 2 37 10 | 0 56 | 14 |
| 17 | 0 51 9 | 0 47 21 | 1 8 | 2 7 57 | 1 58 27 | 2 0 | 2 50 30 | 2 37 50 | 0 53 | 13 |
| 18 | 0 54 3 | 0 50 3 | 1 11 | 2 10 1 | 2 0 22 | 2 0 | 2 51 10 | 2 38 27 | 0 49 | 12 |
| 19 | 0 56 57 | 0 52 44 | 1 14 | 2 12 3 | 2 2 15 | 1 59 | 2 51 47 | 2 39 1 | 0 45 | 11 |
| 20 | 0 59 50 | 0 55 23 | 1 17 | 2 14 2 | 2 4 5 | 1 59 | 2 52 20 | 2 39 32 | 0 41 | 10 |
| 21 | 1 2 41 | 0 58 2 | 1 20 | 2 15 58 | 2 5 53 | 1 58 | 2 52 50 | 2 40 0 | 0 37 | 9 |
| 22 | 1 5 32 | 1 0 40 | 1 23 | 2 17 52 | 2 7 38 | 1 57 | 2 53 17 | 2 40 25 | 0 33 | 8 |
| 23 | 1 8 21 | 1 3 17 | 1 26 | 2 19 44 | 2 9 21 | 1 56 | 2 53 41 | 2 40 47 | 0 25 | 7 |
| 24 | 1 11 9 | 1 5 52 | 1 29 | 2 21 33 | 2 11 2 | 1 54 | 2 54 2 | 2 41 6 | 0 25 | 6 |
| 25 | 1 13 56 | 1 8 27 | 1 32 | 2 23 20 | 2 12 41 | 1 53 | 2 54 20 | 2 41 23 | 0 21 | 5 |
| 26 | 1 16 41 | 1 11 0 | 1 35 | 2 25 4 | 2 14 17 | 1 51 | 2 54 34 | 2 41 36 | 0 17 | 4 |
| 27 | 1 19 25 | 1 13 31 | 1 38 | 2 26 45 | 2 15 51 | 1 50 | 2 54 45 | 2 41 46 | 0 13 | 3 |
| 28 | 1 22 8 | 1 16 2 | 1 40 | 2 28 23 | 2 17 22 | 1 48 | 2 54 54 | 2 41 54 | 0 8 | 2 |
| 29 | 1 24 49 | 1 18 31 | 1 42 | 2 29 59 | 2 18 50 | 1 46 | 2 54 58 | 2 41 58 | 0 4 | 1 |
| 30 | 1 27 28 | 1 20 58 | 1 44 | 2 31 32 | 2 20 16 | 1 44 | 2 55 0 | 2 42 0 | 0 0 | 0 |
| | Sig. 11. *Aust.* 5. *Bor.* | | *Adde.* | Sig. 10. *Aust.* 4. *Bor.* | | *Adde.* | Sig. 9. *Aust.* 3. *Bor.* | | *Adde.* | *Gr.* |

# *Viri Reverendi D.* Jacobi Bradley, *in has ſuas* Satellitum *Tabulas Notæ.*

IN his Tabulis medios *Satellitum* motus limitavimus, factâ collatione plurium Obſervationum, quæ haberi poterant antiquiorum, quæq; præ cæteris accuratæ viſæ ſunt, cum nuperis noſtris apud *Wanſted* captis; *Jove* nempe poſt quatuor Revolutiones in eodem fere Orbis ſui loco exiſtente. Conferendo autem pari modo obſervata, poſt unam, duas vel tres *Jovis* periodos, invenimus aliquando differentias ſat notabiles in motibus *Satellitum* trium Interiorum, maxime vero in *Secundo* ſive *Penintimo*.

Utrum hæ inæqualitates aliqua ex parte oriantur ab *Eccentricitate* Orbium *Satellitum* ac motu *Apſidum*, nondum ſatis conſtat; verum juxta ea quæ in motu *Secundi* annotavimus, probabile eſt eas mutuis *Satellitum* in ſe invicem actionibus tribui poſſe. *Secundus* enim interdum tam brevi temporis ſpatio tantum ab æquabili motu deviat, ut a parvâ *Eccentricitate* effici non poſſit, dum obſervationes aliæ eam non patiuntur magnam. Quantum hactenus colligere datum eſt, periodus horum errorum proxime reſpondet tempori, quo tres *Satellites* Interiores ad eundem ſitum inter ſe & cum Axe Umbræ *Jovis* revolvuntur, id quod fit ſingulis 437 Diebus, poſt 123 *Secundi* periodos. Elapſo hoc ſpatio iidem proxime errores eodem fere ordine reperiuntur ac prius: Intermedio autem tempore, ſc. poſt 60 ejus periodos, deviabit *Secundus* 10′, 20′, 30′, imo interdum 40 temporis minuta, a tenore motûs ante vel poſt ſeptem menſes ſervato. Quoniam vero *Satellites* poſt dictam periodum, eundem in Cælo ſitum non obtinent, fieri poteſt ut hi errores paulo diverſi proveniant. Quod ſi adhuc Eccentricus fuerit hujus *Satellitis* Orbis, ut nuperæ ſuadent obſervationes, compoſitæ utriuſq; inæqualitatis cauſæ motum ejus valde intricatum reddent, nec facile una ab alterâ Obſervatione ſolâ diſtinguetur.

Errores *Primi* ac *Tertii* non ſunt adeo magni, ſed ab iiſdem cauſis, ut videtur, orti; utpote qui ab Eccentricitate ſolâ minime pendent. Senſibilem etiam notavimus differentiam inter Durationes Eclipſium *Primi* apud diverſos *Nodos* factarum, eaſq; alternatim majores & minores eſſe: Majores ſcilicet in *Leone* ad *Nodum* Deſcendentem, ac Annis $168\frac{1}{2}$, $169\frac{1}{2}$ ac 1718, ſaltem $2^{h.}$ 20′ durantes; quæ tamen ad *Nodum* alterum in *Aquario*, Annis 1677 & 1689, $2^{h.}$ 14′ non excedebant; uti conferendo plures Obſervationes Immerſionum & Emerſionum, quantum fieri potuit inter ſe propinquarum, liquido conſtabat. Manifeſtum autem eſt hanc diſcrepantiam ab Eccentricitate

tate Orbis *Satellitis*, si qua sit, non totam oriri. Cui vero causæ tribuenda sit nondum perspicimus. Dum autem futuris invigilamus Observationibus, quarum ope res à posteriori aperiri poterit, liceat sperare aliquos e Geometris magni *Newtoni* æmulis, stabili & probato *Gravitatis Principio* innixos, investigandis à priori mutuis his *Satellitum* effectibus, eximiam operam collocaturos.

Ex iis quas habemus *Quarti* Observationes, constat Orbem ejus *Ellipticum* esse: Et omnia nostra nupera observata probe repræsentantur, ponendo maximam ejus Æquationem æqualem illi Planetæ *Veneris*, sive 48 Min. summamq; ejus *Apsidem* occupasse ♓ 8°. 00′, ineunte Anno 1717. Conferendo autem hanc Hypothesin cum Observationibus prioribus, Annis 1671, 1676, & 1677 factis, calculus multum a Cœlo discrepare inventus est. Reductâ vero *Apside* in ♒ 14°. 00′, ineunte Anno 1677, sublata est fere omnis ista discrepantia. Posito itaq; *Apsidem*, motu æquabili sex graduum in decennio, in consequentia ferri, cum intermediis etiam Observationibus Hypothesis illa probe congruere deprehensa est, quamq; proinde in Tabulis amplexi sumus. Hunc autem computum ubiq; Cœlo conformem (si duo tantum observata excipias, eaq; merito suspecta) intra sextam gradus partem experimur.

Tabula nostra *Æquationum Luminis* supponit radios Lucis motu æquabili per Diametrum Orbis *Terræ* in 14 Temporis Minutis propagari, & omnino varianti *Jovis* a *Terrâ* distantiæ respondet, cum *Jupiter Soli* proximus est. Cum autem in *Aphelio* ejus augetur distantia Planetæ quartâ parte diametri Orbis *Terræ*, necesse habuimus has Æquationes adjectâ Tabellâ corrigere.

Quod Latitudines attinet, e nuperis Observationibus constat Nodos *Quarti* ad grad. 11 ½ *Aquarii* & *Leonis* hodie reperiri; Nodosq; *Tertii* his proximos esse: Quocirca etiam eos *Satellitum* Interiorum ibidem collocamus, id non prohibentibus hactenus a nobis Observatis. Quod si Nodi *Satellitum* ante 40 Annos, grad. 15$^{um}$ *Aquarii* & *Leonis* occupabant, ut vult D. *Cassinus*, cujus authoritate non alia gravior est, tum in qualibet *Jovis* periodo duodecennali unum circiter gradum retrocessisse videntur. Inclinationem ad Planum Orbis *Jovis* à D. *Cassino* positam, *i. e.* 2°. 55′, retinemus in cæteris; *Quarti* vero Orbitam paulo minus inclinari, nempe 2°. 42′, statuimus. Verum circellorum adeo minimorum situm accurate definire plane arduum est, neque absq; *Telescopiis* perfectissimis suscipiendum.

*Coronidis loco placuit Reverendo D.* Pound *Tabulas sequentes prioribus æquipollentes de proprio subjungere, pro Calculo Eclipsium* Primi *Satellitis solâ Additione absolvendo, ad exemplum Tabularum elaboratissimarum D.* Cassini *factas, sed & compendio adhuc multo majori expeditas.*

*E P O-*

## EPOCHÆ CONJUNCTIONUM PRIMI SATELLITIS CUM JOVE.

| Annis Juliani Current. | Conjunct. D. | H. | ′ | ″ | Num. A. | Num. B. |
|---|---|---|---|---|---|---|
| 1719 | 1 | 6 | 11 | 13 | 872 | 395 |
| 1720 | 0 | 20 | 22 | 40 | 956 | 309 |
| 21 | 1 | 5 | 2 | 44 | 40 | 228 |
| 22 | 0 | 19 | 14 | 11 | 125 | 142 |
| 23 | 0 | 9 | 25 | 38 | 209 | 56 |
| 1724 | 1 | 18 | 5 | 42 | 293 | 970 |
| 1725 | 0 | 8 | 17 | 10 | 377 | 888 |
| 26 | 1 | 16 | 57 | 13 | 462 | 807 |
| 27 | 1 | 7 | 8 | 41 | 546 | 721 |
| 28 | 0 | 21 | 20 | 8 | 630 | 635 |
| 1729 | 1 | 6 | 0 | 12 | 715 | 553 |
| 1730 | 0 | 20 | 11 | 39 | 799 | 467 |
| 31 | 0 | 10 | 23 | 7 | 883 | 381 |
| 32 | 0 | 0 | 34 | 34 | 967 | 295 |
| 33 | 0 | 9 | 14 | 38 | 52 | 214 |
| 1734 | 1 | 17 | 54 | 41 | 136 | 132 |
| 1735 | 1 | 8 | 6 | 9 | 220 | 46 |
| 36 | 0 | 22 | 17 | 36 | 305 | 960 |
| 37 | 1 | 6 | 57 | 40 | 389 | 879 |
| 38 | 0 | 21 | 9 | 7 | 473 | 793 |
| 1739 | 0 | 11 | 20 | 35 | 557 | 707 |
| 1740 | 0 | 1 | 32 | 2 | 642 | 621 |
| 41 | 0 | 10 | 12 | 6 | 726 | 539 |
| 42 | 0 | 0 | 23 | 33 | 810 | 453 |
| 43 | 1 | 9 | 3 | 37 | 895 | 372 |
| 1744 | 0 | 23 | 15 | 4 | 979 | 286 |
| 1745 | 1 | 7 | 55 | 8 | 63 | 204 |
| 46 | 0 | 22 | 6 | 35 | 148 | 118 |
| 47 | 0 | 12 | 18 | 3 | 232 | 32 |
| 48 | 0 | 2 | 29 | 30 | 316 | 946 |
| 1749 | 0 | 11 | 9 | 34 | 400 | 865 |

| Annis Juliani Current. | Conjunct. D. | H. | ′ | ″ | Num. A. | Num. B. |
|---|---|---|---|---|---|---|
| 1749 | 0 | 11 | 9 | 34 | 400 | 865 |
| 1750 | 0 | 1 | 21 | 1 | 485 | 779 |
| 51 | 1 | 10 | 1 | 5 | 569 | 697 |
| 52 | 1 | 0 | 12 | 33 | 653 | 611 |
| 53 | 1 | 8 | 52 | 37 | 738 | 530 |
| 1754 | 0 | 23 | 4 | 4 | 822 | 444 |
| 1755 | 0 | 13 | 15 | 32 | 906 | 358 |
| 56 | 0 | 3 | 27 | 0 | 990 | 272 |
| 57 | 0 | 12 | 7 | 3 | 75 | 190 |
| 58 | 0 | 2 | 18 | 30 | 159 | 109 |
| 1759 | 1 | 10 | 58 | 34 | 243 | 23 |
| 1760 | 1 | 1 | 10 | 1 | 328 | 937 |
| 61 | 1 | 9 | 50 | 5 | 412 | 855 |
| 62 | 1 | 0 | 1 | 32 | 496 | 769 |
| 63 | 0 | 14 | 13 | 0 | 580 | 683 |
| 1764 | 0 | 4 | 24 | 27 | 665 | 597 |
| 1765 | 0 | 13 | 4 | 31 | 749 | 516 |
| 66 | 0 | 3 | 15 | 58 | 833 | 430 |
| 67 | 1 | 11 | 56 | 2 | 918 | 348 |
| 68 | 1 | 2 | 7 | 29 | 2 | 262 |
| 1769 | 1 | 10 | 47 | 33 | 86 | 181 |
| 1770 | 1 | 0 | 59 | 0 | 171 | 95 |
| 71 | 0 | 15 | 10 | 28 | 255 | 9 |
| 72 | 0 | 5 | 21 | 56 | 339 | 923 |
| 73 | 0 | 14 | 2 | 0 | 423 | 841 |
| 1774 | 0 | 4 | 13 | 27 | 508 | 760 |
| 1775 | 1 | 12 | 53 | 31 | 592 | 674 |
| 76 | 1 | 3 | 4 | 58 | 676 | 588 |
| 77 | 1 | 11 | 45 | 1 | 761 | 506 |
| 78 | 1 | 1 | 56 | 28 | 845 | 420 |
| 1779 | 0 | 16 | 7 | 56 | 929 | 334 |

# REVOLVTIONES PRIMI SATELLITIS IOVIS IN MENSIBVS.

## IANUARII.

| D. | H. | ′ | ″ | A. | B. |
|---|---|---|---|---|---|
| 1 | 18 | 28 | 36 | 0 | 5 |
| 3 | 12 | 57 | 12 | 1 | 9 |
| 5 | 7 | 25 | 48 | 1 | 14 |
| 7 | 1 | 54 | 24 | 2 | 18 |
| 8 | 20 | 23 | 0 | 2 | 23 |
| 10 | 14 | 51 | 36 | 2 | 27 |
| 12 | 9 | 20 | 12 | 3 | 32 |
| 14 | 3 | 48 | 48 | 3 | 37 |
| 15 | 22 | 17 | 24 | 4 | 41 |
| 17 | 16 | 46 | 0 | 4 | 46 |
| 19 | 11 | 14 | 36 | 4 | 51 |
| 21 | 5 | 43 | 12 | 5 | 55 |
| 23 | 0 | 11 | 47 | 5 | 60 |
| 24 | 18 | 40 | 23 | 6 | 64 |
| 26 | 13 | 8 | 59 | 6 | 69 |
| 28 | 7 | 37 | 35 | 7 | 73 |
| 30 | 2 | 6 | 11 | 7 | 78 |
| 31 | 20 | 34 | 47 | 7 | 82 |

## FEBRUARII.

| | | | | | |
|---|---|---|---|---|---|
| 2 | 15 | 3 | 23 | 8 | 87 |
| 4 | 9 | 31 | 59 | 8 | 92 |
| 6 | 4 | 0 | 35 | 9 | 96 |
| 7 | 22 | 29 | 11 | 9 | 101 |
| 9 | 16 | 57 | 47 | 9 | 105 |
| 11 | 11 | 26 | 23 | 10 | 110 |
| 13 | 5 | 54 | 59 | 10 | 114 |
| 15 | 0 | 23 | 35 | 11 | 118 |
| 16 | 18 | 52 | 11 | 11 | 123 |
| 18 | 13 | 20 | 47 | 11 | 128 |
| 20 | 7 | 49 | 23 | 12 | 132 |
| 22 | 2 | 17 | 59 | 12 | 137 |
| 23 | 20 | 46 | 35 | 13 | 141 |
| 25 | 15 | 15 | 11 | 13 | 146 |
| 27 | 9 | 43 | 47 | 13 | 150 |

## MARTII.

| D. | H. | ′ | ″ | A. | B. |
|---|---|---|---|---|---|
| 1 | 4 | 12 | 23 | 14 | 155 |
| 2 | 22 | 40 | 59 | 14 | 159 |
| 4 | 17 | 9 | 35 | 15 | 164 |
| 6 | 11 | 38 | 10 | 15 | 168 |
| 8 | 6 | 6 | 46 | 16 | 173 |
| 10 | 0 | 35 | 22 | 16 | 177 |
| 11 | 19 | 3 | 58 | 16 | 182 |
| 13 | 13 | 32 | 34 | 17 | 186 |
| 15 | 8 | 1 | 10 | 17 | 190 |
| 17 | 2 | 29 | 46 | 18 | 195 |
| 18 | 20 | 58 | 22 | 18 | 199 |
| 20 | 15 | 26 | 58 | 18 | 204 |
| 22 | 9 | 55 | 34 | 19 | 208 |
| 24 | 4 | 24 | 10 | 19 | 213 |
| 25 | 22 | 52 | 46 | 20 | 217 |
| 27 | 17 | 21 | 22 | 20 | 221 |
| 29 | 11 | 49 | 58 | 20 | 225 |
| 31 | 6 | 18 | 34 | 21 | 230 |

## APRILIS.

| | | | | | |
|---|---|---|---|---|---|
| 2 | 0 | 47 | 10 | 21 | 235 |
| 3 | 19 | 15 | 46 | 22 | 239 |
| 5 | 13 | 44 | 22 | 22 | 244 |
| 7 | 8 | 12 | 58 | 22 | 248 |
| 9 | 2 | 41 | 34 | 23 | 252 |
| 10 | 21 | 10 | 10 | 23 | 257 |
| 12 | 15 | 38 | 46 | 24 | 261 |
| 14 | 10 | 7 | 22 | 24 | 265 |
| 16 | 4 | 35 | 58 | 25 | 270 |
| 17 | 23 | 4 | 33 | 25 | 274 |
| 19 | 17 | 33 | 9 | 25 | 279 |
| 21 | 12 | 1 | 45 | 26 | 283 |
| 23 | 6 | 30 | 21 | 26 | 287 |
| 25 | 0 | 58 | 57 | 27 | 292 |
| 26 | 19 | 27 | 33 | 27 | 296 |
| 28 | 13 | 56 | 9 | 27 | 300 |
| 30 | 8 | 24 | 45 | 28 | 304 |

## MAII.

| D. | H. | ′ | ″ | A. | B. |
|---|---|---|---|---|---|
| 0 | 8 | 24 | 45 | 28 | 304 |
| 2 | 2 | 53 | 21 | 28 | 309 |
| 3 | 21 | 21 | 57 | 29 | 313 |
| 5 | 15 | 50 | 33 | 29 | 317 |
| 7 | 10 | 19 | 9 | 29 | 322 |
| 9 | 4 | 47 | 45 | 30 | 326 |
| 10 | 23 | 16 | 21 | 30 | 330 |
| 12 | 17 | 44 | 57 | 31 | 335 |
| 14 | 12 | 13 | 33 | 31 | 339 |
| 16 | 6 | 42 | 9 | 31 | 343 |
| 18 | 1 | 10 | 45 | 32 | 348 |
| 19 | 19 | 39 | 21 | 32 | 352 |
| 21 | 14 | 7 | 57 | 33 | 356 |
| 23 | 8 | 36 | 33 | 33 | 361 |
| 25 | 3 | 5 | 9 | 33 | 365 |
| 26 | 21 | 33 | 45 | 34 | 369 |
| 28 | 16 | 2 | 21 | 34 | 373 |
| 30 | 10 | 30 | 57 | 35 | 378 |

## IUNII.

| | | | | | |
|---|---|---|---|---|---|
| 1 | 4 | 59 | 32 | 35 | 382 |
| 2 | 23 | 28 | 8 | 36 | 386 |
| 4 | 17 | 56 | 44 | 36 | 391 |
| 6 | 12 | 25 | 20 | 36 | 395 |
| 8 | 6 | 53 | 56 | 37 | 399 |
| 10 | 1 | 22 | 32 | 37 | 403 |
| 11 | 19 | 51 | 8 | 38 | 408 |
| 13 | 14 | 19 | 44 | 38 | 412 |
| 15 | 8 | 48 | 20 | 38 | 416 |
| 17 | 3 | 16 | 56 | 39 | 420 |
| 18 | 21 | 45 | 32 | 39 | 425 |
| 20 | 16 | 14 | 8 | 40 | 429 |
| 22 | 10 | 42 | 44 | 40 | 433 |
| 24 | 5 | 11 | 20 | 40 | 438 |
| 25 | 23 | 39 | 56 | 41 | 442 |
| 27 | 18 | 8 | 32 | 41 | 446 |
| 29 | 12 | 37 | 8 | 42 | 450 |

# REVOLUTIONES PRIMI SATELLITIS JOVIS IN MENSIBUS.

## JULII.

| D. | H. | ′ | ″ | A. | B. |
|---|---|---|---|---|---|
| 1 | 7 | 5 | 44 | 42 | 455 |
| 3 | 1 | 34 | 20 | 42 | 459 |
| 4 | 20 | 2 | 56 | 43 | 463 |
| 6 | 14 | 31 | 32 | 43 | 468 |
| 8 | 9 | 0 | 8 | 44 | 472 |
| 10 | 3 | 28 | 44 | 44 | 476 |
| 11 | 21 | 57 | 20 | 45 | 480 |
| 13 | 16 | 25 | 55 | 45 | 485 |
| 15 | 10 | 54 | 31 | 45 | 489 |
| 17 | 5 | 23 | 7 | 46 | 493 |
| 18 | 23 | 51 | 43 | 46 | 498 |
| 20 | 18 | 20 | 19 | 47 | 502 |
| 22 | 12 | 48 | 55 | 47 | 506 |
| 24 | 7 | 17 | 31 | 47 | 510 |
| 26 | 1 | 46 | 7 | 48 | 515 |
| 27 | 20 | 14 | 43 | 48 | 519 |
| 29 | 14 | 43 | 19 | 49 | 523 |
| 31 | 9 | 11 | 55 | 49 | 528 |

## AUGUSTI.

| | | | | | |
|---|---|---|---|---|---|
| 2 | 3 | 40 | 31 | 49 | 532 |
| 3 | 22 | 9 | 7 | 50 | 536 |
| 5 | 16 | 37 | 43 | 50 | 541 |
| 7 | 11 | 6 | 19 | 51 | 545 |
| 9 | 5 | 34 | 55 | 51 | 549 |
| 11 | 0 | 3 | 31 | 51 | 554 |
| 12 | 18 | 32 | 7 | 52 | 558 |
| 14 | 13 | 0 | 43 | 52 | 562 |
| 16 | 7 | 29 | 19 | 53 | 567 |
| 18 | 1 | 57 | 55 | 53 | 571 |
| 19 | 20 | 26 | 31 | 54 | 575 |
| 21 | 14 | 55 | 7 | 54 | 580 |
| 23 | 9 | 23 | 43 | 54 | 584 |
| 25 | 3 | 52 | 18 | 55 | 588 |
| 26 | 22 | 20 | 54 | 55 | 593 |
| 28 | 16 | 49 | 30 | 56 | 597 |
| 30 | 11 | 18 | 6 | 56 | 602 |

## SEPTEMBRIS.

| D. | H. | ′ | ″ | A. | B. |
|---|---|---|---|---|---|
| 1 | 5 | 46 | 42 | 56 | 606 |
| 3 | 0 | 15 | 18 | 57 | 610 |
| 4 | 18 | 43 | 54 | 57 | 615 |
| 6 | 13 | 12 | 30 | 58 | 619 |
| 8 | 7 | 41 | 6 | 58 | 624 |
| 10 | 2 | 9 | 42 | 58 | 628 |
| 11 | 20 | 38 | 18 | 59 | 632 |
| 13 | 15 | 6 | 54 | 59 | 637 |
| 15 | 9 | 35 | 30 | 60 | 641 |
| 17 | 4 | 4 | 6 | 60 | 646 |
| 18 | 22 | 32 | 42 | 60 | 650 |
| 20 | 17 | 1 | 18 | 61 | 655 |
| 22 | 11 | 29 | 54 | 61 | 659 |
| 24 | 5 | 58 | 30 | 62 | 663 |
| 26 | 0 | 27 | 6 | 62 | 668 |
| 27 | 18 | 55 | 42 | 62 | 672 |
| 29 | 13 | 24 | 18 | 63 | 677 |

## OCTOBRIS.

| | | | | | |
|---|---|---|---|---|---|
| 1 | 7 | 52 | 54 | 63 | 681 |
| 3 | 2 | 21 | 30 | 64 | 686 |
| 4 | 20 | 50 | 6 | 64 | 690 |
| 6 | 15 | 18 | 41 | 65 | 695 |
| 8 | 9 | 47 | 17 | 65 | 699 |
| 10 | 4 | 15 | 53 | 65 | 704 |
| 11 | 22 | 44 | 29 | 66 | 708 |
| 13 | 17 | 13 | 5 | 66 | 713 |
| 15 | 11 | 41 | 41 | 67 | 717 |
| 17 | 6 | 10 | 17 | 67 | 721 |
| 19 | 0 | 38 | 53 | 67 | 726 |
| 20 | 19 | 7 | 29 | 68 | 730 |
| 22 | 13 | 36 | 5 | 68 | 735 |
| 24 | 8 | 4 | 41 | 69 | 739 |
| 26 | 2 | 33 | 17 | 69 | 744 |
| 27 | 21 | 1 | 53 | 69 | 748 |
| 29 | 15 | 30 | 29 | 70 | 753 |

## NOVEMBRIS.

| D. | H. | ′ | ″ | A. | B. |
|---|---|---|---|---|---|
| 0 | 9 | 59 | 5 | 70 | 758 |
| 2 | 4 | 27 | 41 | 71 | 762 |
| 3 | 22 | 56 | 17 | 71 | 767 |
| 5 | 17 | 24 | 53 | 71 | 772 |
| 7 | 11 | 53 | 29 | 72 | 776 |
| 9 | 6 | 22 | 5 | 72 | 781 |
| 11 | 0 | 50 | 41 | 73 | 785 |
| 12 | 19 | 19 | 17 | 73 | 790 |
| 14 | 13 | 47 | 53 | 74 | 794 |
| 16 | 8 | 16 | 29 | 74 | 799 |
| 18 | 2 | 45 | 5 | 74 | 804 |
| 19 | 21 | 13 | 40 | 75 | 808 |
| 21 | 15 | 42 | 16 | 75 | 813 |
| 23 | 10 | 10 | 52 | 76 | 817 |
| 25 | 4 | 39 | 28 | 76 | 822 |
| 26 | 23 | 8 | 4 | 76 | 827 |
| 28 | 17 | 36 | 40 | 77 | 831 |
| 30 | 12 | 5 | 16 | 77 | 836 |

## DECEMBRIS.

| | | | | | |
|---|---|---|---|---|---|
| 2 | 6 | 33 | 52 | 78 | 840 |
| 4 | 1 | 2 | 28 | 78 | 845 |
| 5 | 19 | 31 | 4 | 78 | 849 |
| 7 | 13 | 59 | 40 | 79 | 854 |
| 9 | 8 | 28 | 16 | 79 | 859 |
| 11 | 2 | 56 | 52 | 80 | 863 |
| 12 | 21 | 25 | 28 | 80 | 868 |
| 14 | 15 | 54 | 4 | 80 | 873 |
| 16 | 10 | 22 | 40 | 81 | 877 |
| 18 | 4 | 51 | 16 | 81 | 882 |
| 19 | 23 | 19 | 52 | 82 | 886 |
| 21 | 17 | 48 | 28 | 82 | 891 |
| 23 | 12 | 17 | 4 | 82 | 896 |
| 25 | 6 | 45 | 40 | 83 | 900 |
| 27 | 1 | 14 | 16 | 83 | 905 |
| 28 | 19 | 42 | 52 | 84 | 909 |
| 30 | 14 | 11 | 28 | 84 | 914 |

## PRIMÆ ÆQUATIONES CONJUNCTIONUM PRIMI SATELLITIS CUM JOVE.

| Num. A. | Æquat. Conjunct. Adde. | Æq. Num. B. | Num. A. | Æquat. Conjunct. Adde. | Æq. Num. B. | Num. A. | Æquat. Conjunct. Adde. | Æq. Num. B. | Num. A. | Æquat. Conjunct. Adde. | Æq. Num. B. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ′ ″ | | | ′ ″ | | | ′ ″ | | | ′ ″ | |
| 0 | 39 8 | 15 | 128 | 12 7 | 26 | 256 | 0 1 | 31 | 384 | 11 52 | 26 |
| 4 | 38 12 | 16 | 132 | 11 27 | 26 | 260 | 0 0 | 31 | 388 | 12 37 | 26 |
| 8 | 37 16 | 16 | 136 | 10 47 | 26 | 264 | 0 1 | 31 | 392 | 13 23 | 25 |
| 12 | 36 21 | 16 | 140 | 10 9 | 27 | 268 | 0 3 | 31 | 396 | 14 11 | 25 |
| 16 | 35 26 | 17 | 144 | 9 31 | 27 | 272 | 0 7 | 31 | 400 | 14 59 | 25 |
| 20 | 34 30 | 17 | 148 | 8 45 | 27 | 276 | 0 12 | 31 | 404 | 15 48 | 24 |
| 24 | 33 35 | 17 | 152 | 8 19 | 27 | 280 | 0 19 | 31 | 408 | 16 38 | 24 |
| 28 | 32 40 | 18 | 156 | 7 44 | 28 | 284 | 0 28 | 30 | 412 | 17 30 | 24 |
| 32 | 31 45 | 18 | 160 | 7 10 | 28 | 288 | 0 38 | 30 | 416 | 18 22 | 23 |
| 36 | 30 50 | 19 | 164 | 6 38 | 28 | 292 | 0 50 | 30 | 420 | 19 15 | 23 |
| 40 | 29 56 | 19 | 168 | 6 7 | 28 | 296 | 1 3 | 30 | 424 | 20 9 | 23 |
| 44 | 29 3 | 19 | 172 | 5 37 | 28 | 300 | 1 17 | 30 | 428 | 21 4 | 22 |
| 48 | 28 10 | 20 | 176 | 5 8 | 29 | 304 | 1 33 | 30 | 432 | 21 59 | 22 |
| 52 | 27 16 | 20 | 180 | 4 41 | 29 | 308 | 1 50 | 30 | 436 | 22 55 | 22 |
| 56 | 26 23 | 20 | 184 | 4 15 | 29 | 312 | 2 8 | 30 | 440 | 23 53 | 21 |
| 60 | 25 30 | 21 | 188 | 3 49 | 29 | 316 | 2 28 | 30 | 444 | 24 51 | 21 |
| 64 | 24 38 | 21 | 192 | 3 24 | 29 | 320 | 2 51 | 30 | 448 | 25 49 | 21 |
| 68 | 23 47 | 21 | 196 | 3 1 | 29 | 324 | 3 15 | 29 | 452 | 26 48 | 20 |
| 72 | 22 56 | 22 | 200 | 2 40 | 30 | 328 | 3 40 | 29 | 456 | 27 48 | 20 |
| 76 | 22 5 | 22 | 204 | 2 20 | 30 | 332 | 4 6 | 29 | 460 | 28 48 | 19 |
| 80 | 21 15 | 22 | 208 | 2 1 | 30 | 336 | 4 34 | 29 | 464 | 29 49 | 19 |
| 84 | 20 26 | 23 | 212 | 1 42 | 30 | 340 | 5 3 | 29 | 468 | 30 50 | 19 |
| 88 | 19 37 | 23 | 216 | 1 25 | 30 | 344 | 5 34 | 29 | 472 | 31 51 | 18 |
| 92 | 18 48 | 23 | 220 | 1 10 | 30 | 348 | 6 5 | 28 | 476 | 32 53 | 18 |
| 96 | 18 0 | 24 | 224 | 0 58 | 30 | 352 | 6 38 | 28 | 480 | 33 55 | 17 |
| 100 | 17 14 | 24 | 228 | 0 47 | 30 | 356 | 7 13 | 28 | 484 | 34 57 | 17 |
| 104 | 16 28 | 24 | 232 | 0 36 | 30 | 360 | 7 50 | 28 | 488 | 35 59 | 17 |
| 108 | 15 42 | 24 | 236 | 0 26 | 30 | 364 | 8 27 | 27 | 492 | 37 1 | 16 |
| 112 | 14 57 | 25 | 240 | 0 18 | 30 | 368 | 9 6 | 27 | 496 | 38 5 | 16 |
| 116 | 14 13 | 25 | 244 | 0 12 | 31 | 372 | 9 46 | 27 | 500 | 39 8 | 15 |
| 120 | 13 30 | 25 | 248 | 0 7 | 31 | 376 | 10 27 | 27 | 504 | 40 11 | 15 |
| 124 | 12 48 | 26 | 252 | 0 4 | 31 | 380 | 11 9 | 26 | 508 | 41 15 | 14 |
| 128 | 12 7 | 26 | 256 | 0 1 | 31 | 384 | 11 52 | 26 | 512 | 42 17 | 14 |

## PRIMÆ ÆQUATIONES CONJUNCTIONUM PRIMI SATELLITIS CUM JOVE.

| Num. A. | Æquat. Conjunct. Adde. | Æq. Num. B. | Num. A. | Æquat. Conjunct. Adde. | Æq. Num. B. | Num. A. | Æquat. Conjunct. Adde. | Æq. Num. B. | Num. A. | Æquat. Conjunct. Adde. | Æq. Num. B. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ′ ″ | | | ′ ″ | | | ′ ″ | | | ′ ″ | |
| 512 | 42 17 | 14 | 640 | 70 26 | 3 | 768 | 77 40 | 0 | 896 | 61 48 | 6 |
| 516 | 43 19 | 14 | 644 | 71 3 | 3 | 772 | 77 29 | 0 | 900 | 61 2 | 7 |
| 520 | 44 21 | 13 | 648 | 71 38 | 3 | 776 | 77 18 | 0 | 904 | 60 15 | 7 |
| 524 | 45 23 | 13 | 652 | 72 11 | 2 | 780 | 77 6 | 0 | 908 | 59 28 | 7 |
| 528 | 46 25 | 13 | 656 | 72 42 | 2 | 784 | 76 51 | 1 | 912 | 58 39 | 8 |
| 532 | 47 26 | 12 | 660 | 73 13 | 2 | 788 | 76 34 | 1 | 916 | 57 50 | 8 |
| 536 | 48 27 | 12 | 664 | 73 42 | 2 | 792 | 76 15 | 1 | 920 | 57 1 | 8 |
| 540 | 49 28 | 11 | 668 | 74 10 | 2 | 796 | 75 56 | 1 | 924 | 56 11 | 9 |
| 544 | 50 28 | 11 | 672 | 74 36 | 1 | 800 | 75 36 | 1 | 928 | 55 20 | 9 |
| 548 | 51 28 | 11 | 676 | 75 1 | 1 | 804 | 75 15 | 1 | 932 | 54 29 | 9 |
| 552 | 52 27 | 10 | 680 | 75 25 | 1 | 808 | 74 52 | 1 | 936 | 53 38 | 10 |
| 556 | 53 25 | 10 | 684 | 75 48 | 1 | 812 | 74 27 | 1 | 940 | 52 46 | 10 |
| 560 | 54 23 | 9 | 688 | 76 8 | 1 | 816 | 74 1 | 2 | 944 | 51 53 | 10 |
| 564 | 55 21 | 9 | 692 | 76 26 | 1 | 820 | 73 35 | 2 | 948 | 51 0 | 11 |
| 568 | 56 17 | 9 | 696 | 76 43 | 0 | 824 | 73 8 | 2 | 952 | 50 6 | 11 |
| 572 | 57 12 | 8 | 700 | 76 59 | 0 | 828 | 72 39 | 2 | 956 | 49 13 | 11 |
| 576 | 58 7 | 8 | 704 | 77 13 | 0 | 832 | 72 9 | 2 | 960 | 48 20 | 12 |
| 580 | 59 1 | 8 | 708 | 77 26 | 0 | 836 | 71 38 | 3 | 964 | 47 26 | 12 |
| 584 | 59 54 | 7 | 712 | 77 38 | 0 | 840 | 71 6 | 3 | 968 | 46 31 | 12 |
| 588 | 60 46 | 7 | 716 | 77 48 | 0 | 844 | 70 32 | 3 | 972 | 45 36 | 13 |
| 592 | 61 38 | 6 | 720 | 77 57 | 0 | 848 | 69 57 | 3 | 976 | 44 41 | 13 |
| 596 | 62 28 | 6 | 724 | 78 4 | 0 | 852 | 69 21 | 3 | 980 | 43 46 | 13 |
| 600 | 63 17 | 6 | 728 | 78 9 | 0 | 856 | 68 45 | 4 | 984 | 42 50 | 14 |
| 604 | 64 5 | 5 | 732 | 78 13 | 0 | 860 | 68 7 | 4 | 988 | 41 55 | 14 |
| 608 | 64 53 | 5 | 736 | 78 15 | 0 | 864 | 67 29 | 4 | 992 | 41 0 | 14 |
| 612 | 65 39 | 5 | 740 | 78 16 | 0 | 868 | 66 49 | 4 | 996 | 40 4 | 15 |
| 616 | 66 24 | 5 | 744 | 78 15 | 0 | 872 | 66 9 | 5 | 1000 | 39 8 | 15 |
| 620 | 67 7 | 4 | 748 | 78 12 | 0 | 876 | 65 28 | 5 | 1004 | 38 12 | 16 |
| 624 | 67 49 | 4 | 752 | 78 9 | 0 | 880 | 64 46 | 5 | 1008 | 37 16 | 16 |
| 628 | 68 30 | 4 | 756 | 78 4 | 0 | 884 | 64 3 | 5 | 1012 | 36 21 | 16 |
| 632 | 69 10 | 4 | 760 | 77 58 | 0 | 888 | 63 19 | 5 | 1016 | 35 26 | 17 |
| 636 | 69 49 | 3 | 764 | 77 50 | 0 | 892 | 62 34 | 5 | 1020 | 34 30 | 17 |
| 640 | 70 26 | 3 | 768 | 77 40 | 0 | 896 | 61 48 | 6 | 1024 | 33 35 | 17 |

## SECUNDÆ ÆQUATIONES CONJUNCTIONUM PRIMI SATELLITIS CUM JOVE.

| Num. B Æqu. | 0 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 |
|---|---|---|---|---|---|---|---|---|---|---|
| | Æquat. | Æquat. | Æqu. | Æqu. | Æqu. | Æqu. | Æqu. | Æqu. | Æquat. | Æquat. |
| | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ | ′ ″ |
| 0 | 14 0 | 12 52 | 9 45 | 5 30 | 1 37 | 0 0 | 1 37 | 5 30 | 9 45 | 12 52 |
| 4 | 14 0 | 12 46 | 9 36 | 5 20 | 1 30 | 0 0 | 1 44 | 5 40 | 9 54 | 12 58 |
| 8 | 13 59 | 12 40 | 9 26 | 5 9 | 1 23 | 0 1 | 1 52 | 5 51 | 10 3 | 13 2 |
| 12 | 13 59 | 12 35 | 9 17 | 4 59 | 1 16 | 0 2 | 1 59 | 6 1 | 10 12 | 13 7 |
| 16 | 13 58 | 12 29 | 9 7 | 4 48 | 1 9 | 0 3 | 2 7 | 6 11 | 10 21 | 13 11 |
| 20 | 13 57 | 12 23 | 8 58 | 4 38 | 1 3 | 0 4 | 2 15 | 6 22 | 10 31 | 13 16 |
| 24 | 13 56 | 12 17 | 8 48 | 4 28 | 0 57 | 0 5 | 2 24 | 6 33 | 10 40 | 13 20 |
| 28 | 13 54 | 12 11 | 8 38 | 4 18 | 0 52 | 0 7 | 2 32 | 6 44 | 10 49 | 13 25 |
| 32 | 13 53 | 12 4 | 8 28 | 4 8 | 0 46 | 0 10 | 2 41 | 6 55 | 10 57 | 13 29 |
| 36 | 13 51 | 11 56 | 8 17 | 3 58 | 0 40 | 0 13 | 2 50 | 7 5 | 11 5 | 13 33 |
| 40 | 13 49 | 11 49 | 8 7 | 3 48 | 0 35 | 0 16 | 2 59 | 7 16 | 11 13 | 13 36 |
| 44 | 13 47 | 11 42 | 7 57 | 3 38 | 0 31 | 0 19 | 3 9 | 7 26 | 11 20 | 13 38 |
| 48 | 13 44 | 11 34 | 7 47 | 3 29 | 0 27 | 0 23 | 3 19 | 7 36 | 11 27 | 13 41 |
| 52 | 13 41 | 11 27 | 7 36 | 3 19 | 0 23 | 0 27 | 3 29 | 7 47 | 11 34 | 13 44 |
| 56 | 13 38 | 11 20 | 7 26 | 3 9 | 0 19 | 0 31 | 3 38 | 7 57 | 11 42 | 13 47 |
| 60 | 13 36 | 11 13 | 7 16 | 2 59 | 0 16 | 0 35 | 3 48 | 8 7 | 11 49 | 13 49 |
| 64 | 13 33 | 11 5 | 7 5 | 2 50 | 0 13 | 0 40 | 3 58 | 8 17 | 11 56 | 13 51 |
| 68 | 13 29 | 10 57 | 6 55 | 2 41 | 0 10 | 0 46 | 4 8 | 8 28 | 12 4 | 13 53 |
| 72 | 13 25 | 10 49 | 6 44 | 2 32 | 0 7 | 0 52 | 4 18 | 8 38 | 12 11 | 13 54 |
| 76 | 13 20 | 10 40 | 6 33 | 2 24 | 0 5 | 0 57 | 4 28 | 8 48 | 12 17 | 13 56 |
| 80 | 13 16 | 10 31 | 6 22 | 2 15 | 0 4 | 1 3 | 4 38 | 8 58 | 12 23 | 13 57 |
| 84 | 13 11 | 10 21 | 6 11 | 2 7 | 0 3 | 1 9 | 4 48 | 9 7 | 12 29 | 13 58 |
| 88 | 13 7 | 10 12 | 6 1 | 1 59 | 0 2 | 1 16 | 4 59 | 9 17 | 12 35 | 13 59 |
| 92 | 13 2 | 10 3 | 5 51 | 1 52 | 0 1 | 1 23 | 5 9 | 9 26 | 12 40 | 13 59 |
| 96 | 12 58 | 9 54 | 5 40 | 1 44 | 0 0 | 1 30 | 5 20 | 9 36 | 12 46 | 14 0 |
| 100 | 12 52 | 9 45 | 5 30 | 1 37 | 0 0 | 1 37 | 5 30 | 9 45 | 12 52 | 14 0 |

## TERTIÆ ÆQUATIONES ADDENDÆ.

| Num. A. | Æquationes. | Num. A. |
|---|---|---|
| | ′ ″ | |
| 0 | 3 30 | 1000 |
| 20 | 3 29 | 980 |
| 40 | 3 28 | 960 |
| 60 | 3 25 | 940 |
| 80 | 3 19 | 920 |
| 100 | 3 12 | 900 |
| 120 | 3 4 | 880 |
| 140 | 2 56 | 860 |
| 160 | 2 46 | 840 |
| 180 | 2 34 | 820 |
| 200 | 2 22 | 800 |
| 220 | 2 10 | 780 |
| 240 | 1 57 | 760 |
| 260 | 1 44 | 740 |
| 280 | 1 30 | 720 |
| 300 | 1 17 | 700 |
| 320 | 1 5 | 680 |
| 340 | 0 53 | 660 |
| 360 | 0 41 | 640 |
| 380 | 0 31 | 620 |
| 400 | 0 22 | 600 |
| 420 | 0 14 | 580 |
| 440 | 0 8 | 560 |
| 460 | 0 4 | 540 |
| 480 | 0 2 | 520 |
| 500 | 0 0 | 500 |

## SEMIDURATIONES ECLIPSIUM PRIMI SATELLITIS JOVIS.

| Num. A. | Semidurationes. | Num. A. | Semidurationes. | Num. A. | Semidurationes. | Num. A. | Semidurationes. |
|---|---|---|---|---|---|---|---|
| | H. ′ ″ | | H. ′ ″ | | H. ′ ″ | | H. ′ ″ |
| 0 | 1 5 9 | 250 | 1 7 0 | 500 | 1 5 9 | 750 | 1 7 46 |
| 10 | 1 4 56 | 260 | 1 7 15 | 510 | 1 4 53 | 760 | 1 7 57 |
| 20 | 1 4 44 | 270 | 1 7 31 | 520 | 1 4 39 | 770 | 1 8 7 |
| 30 | 1 4 33 | 280 | 1 7 45 | 530 | 1 4 26 | 780 | 1 8 15 |
| 40 | 1 4 23 | 290 | 1 7 57 | 540 | 1 4 15 | 790 | 1 8 22 |
| 50 | 1 4 14 | 300 | 1 8 7 | 550 | 1 4 7 | 800 | 1 8 26 |
| 60 | 1 4 7 | 310 | 1 8 15 | 560 | 1 4 3 | 810 | 1 8 28 |
| 70 | 1 4 4 | 320 | 1 8 22 | 570 | 1 4 1 | 820 | 1 8 30 |
| 80 | 1 4 2 | 330 | 1 8 27 | 580 | 1 4 0 | 830 | 1 8 28 |
| 90 | 1 4 0 | 340 | 1 8 28 | 590 | 1 4 3 | 840 | 1 8 26 |
| 100 | 1 4 2 | 350 | 1 8 29 | 600 | 1 4 7 | 850 | 1 8 22 |
| 110 | 1 4 3 | 360 | 1 8 27 | 610 | 1 4 13 | 860 | 1 8 16 |
| 120 | 1 4 6 | 370 | 1 8 24 | 620 | 1 4 23 | 870 | 1 8 8 |
| 130 | 1 4 12 | 380 | 1 8 17 | 630 | 1 4 35 | 880 | 1 8 0 |
| 140 | 1 4 21 | 390 | 1 8 9 | 640 | 1 4 49 | 890 | 1 7 50 |
| 150 | 1 4 31 | 400 | 1 7 58 | 650 | 1 5 4 | 900 | 1 7 37 |
| 160 | 1 4 42 | 410 | 1 7 46 | 660 | 1 5 19 | 910 | 1 7 22 |
| 170 | 1 4 55 | 420 | 1 7 31 | 670 | 1 5 36 | 920 | 1 7 8 |
| 180 | 1 5 9 | 430 | 1 7 14 | 680 | 1 5 54 | 930 | 1 6 55 |
| 190 | 1 5 23 | 440 | 1 6 58 | 690 | 1 6 10 | 940 | 1 6 40 |
| 200 | 1 5 39 | 450 | 1 6 40 | 700 | 1 6 28 | 950 | 1 6 23 |
| 210 | 1 5 55 | 460 | 1 6 20 | 710 | 1 6 46 | 960 | 1 6 8 |
| 220 | 1 6 11 | 470 | 1 6 2 | 720 | 1 7 2 | 970 | 1 5 54 |
| 230 | 1 6 26 | 480 | 1 5 45 | 730 | 1 7 17 | 980 | 1 5 37 |
| 240 | 1 6 43 | 490 | 1 5 26 | 740 | 1 7 33 | 990 | 1 5 22 |
| 250 | 1 7 0 | 500 | 1 5 9 | 750 | 1 7 46 | 1000 | 1 5 9 |

## *De harum Tabularum Conſtructione.*

HÆ Tabulæ e præcedentibus confectæ, ac facilitate Calculi nullis cautionibus obnoxii plurimum ſe commendantes, in uſus *Geographicos* Longitudinibus locorum inveniendis deſtinatæ ſunt: Earum enim ope, abſque aliarum Tabularum ſubſidio, Eclipſes *Primi* Satellitis *Jovis* ſolâ Additione ſtatim obtinentur, ne mora tædiumve Computi operoſioris minus exercitatos ab his ſtudiis deterreret.

Quales autem ſint hi Numeri ut melius capiat Lector, ſciat *Epochas Conjunctionum* eſſe momenta Conjunctionis Satellitis cum loco *Jovis* medio, ab ineunte *Januario* Currentis Anni *Juliani* primæ, demptis 39′. 8″ temporis, quibus Satelles ille Æquationem *Jovis* maximam, ſive 5°. 31′. 36″ peragit. *Num.* A ubiq; eſt ipſa Anomalia media *Jovis*, Circulo in partes milleſimas, quarum ſingulæ æquipollent 21′. 36″, dividi ſuppoſito. *Num.* B autem angulus eſt quo, tempore Epochæ, medius *Jovis* locus diſtat a *Solis* vero, itidem in circuli milleſimis æſtimatus, ſed demptis 15$\frac{1}{2}$ partibus, qualium eſt æquatio *Jovis* maxima.

Sublatis igitur ex Epochis æquationibus maximis, cæteræ omnes ubiq; fiunt Addendæ: Et quidem *Æquatio Conjunctionum* eſt ſumma vel differentia ipſorum 39′. 8″ ac Temporis quo æquatio *Jovis*, ad datam Anomaliam mediam A, motu Satellitis a *Jove* percurritur; unde nulla fit ad *Num.* A 260, quæ vero ad *Num.* A 740 dupla fit maximæ, ſive 1$^{H.}$ 18′. 16″. Pari modo *Æquat. Num.* B eſt ſumma vel Differentia partium 15$\frac{1}{2}$ & ejuſdem æquationis *Jovis* in circuli milleſimis, ſub contrario Titulo applicatæ, ac proinde dupla fit, ſive 31, ad *Num.* A 260, nulla vero ab 740. In Menſibus autem inæqualia facta ſunt *Num.* B augmenta, pro ratione inæqualitatis motus Solaris per totum Annum: Quapropter ſi *Num.* B collecto adjiciatur ejus æquatio, fiet ſumma (ſive *Numerus* B *æquatus* angulus Commutationis dictus, *i. e.* Diſtantia *Solis* a Loco *Jovis* Heliocentrico, quocum ſumenda eſt *Æquatio Secunda*, quæ eadem cum *Æquatione Luminis*. *Æquatio* autem *Tertia* non alia eſt quam *Correctio Æquationis Luminis* cum *Num.* A capienda, pariterq; ſemper addenda.

Hoc autem artificio non ſolum Æquationes omnes fiunt Additivæ, ſed cum ordine decimali procedat uterq; Numerus A & B, multo tutius ac facilius colliguntur.

In Anno autem *Biſſextili* poſt *Februarium* auferendus eſt unus Dies è temporibus Conjunctionum hoc Calculo inventis.

*EPOCHÆ*

## EPOCHÆ MEDIORUM MOTUUM QUINQUE SATELLITUM SATURNI.

| Annis Juli-anis ineuntibus. | Primus ab Æquinoct. | | | Secundus ab Æquinoct. | | | Tertius ab Æquinoct. | | | Quartus ab Æquinoct. | | | Quintus ab Æquinoct. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S | o | ′ | S | o | ′ | S | o | ′ | S | o | ′ | S | o | ′ |
| 1661 | 3 | 3 | 2 | 10 | 12 | 31 | 4 | 22 | 38 | 11 | 13 | 33 | 11 | 7 | 46 |
| 81 | 9 | 28 | 16 | 11 | 3 | 40 | 5 | 10 | 7 | 0 | 28 | 49 | 0 | 9 | 37 |
| 1701 | 4 | 23 | 31 | 11 | 24 | 48 | 5 | 27 | 35 | 2 | 14 | 4 | 1 | 11 | 28 |
| 14 | 5 | 25 | 15 | 9 | 11 | 40 | 6 | 7 | 2 | 11 | 19 | 50 | 11 | 19 | 2 |
| 15 | 9 | 29 | 50 | 1 | 21 | 50 | 3 | 23 | 59 | 10 | 10 | 28 | 6 | 25 | 29 |
| 1716 | 2 | 4 | 25 | 6 | 2 | 1 | 1 | 10 | 56 | 9 | 1 | 5 | 2 | 1 | 57 |
| 17 | 0 | 19 | 42 | 2 | 23 | 43 | 1 | 17 | 34 | 8 | 14 | 16 | 9 | 12 | 56 |
| 18 | 4 | 24 | 17 | 7 | 3 | 54 | 11 | 4 | 31 | 7 | 4 | 54 | 4 | 19 | 24 |
| 19 | 8 | 28 | 53 | 11 | 14 | 4 | 8 | 21 | 28 | 5 | 25 | 31 | 11 | 25 | 51 |
| 1720 | 1 | 3 | 28 | 3 | 24 | 15 | 6 | 8 | 26 | 4 | 16 | 8 | 7 | 2 | 19 |
| 1721 | 11 | 18 | 45 | 0 | 15 | 57 | 6 | 15 | 4 | 3 | 29 | 19 | 2 | 13 | 19 |
| 22 | 3 | 23 | 20 | 4 | 26 | 8 | 4 | 2 | 1 | 2 | 19 | 57 | 9 | 19 | 46 |
| 23 | 7 | 27 | 55 | 9 | 6 | 18 | 1 | 18 | 58 | 1 | 10 | 34 | 4 | 26 | 14 |
| 24 | 0 | 2 | 31 | 1 | 16 | 28 | 11 | 5 | 55 | 0 | 1 | 11 | 0 | 2 | 41 |
| 1725 | 10 | 17 | 48 | 10 | 8 | 11 | 11 | 12 | 34 | 11 | 14 | 23 | 7 | 13 | 41 |
| 1726 | 2 | 22 | 23 | 2 | 18 | 21 | 8 | 29 | 31 | 10 | 5 | 0 | 2 | 20 | 8 |
| 27 | 6 | 26 | 58 | 6 | 28 | 32 | 6 | 16 | 28 | 8 | 25 | 37 | 9 | 26 | 36 |
| 28 | 11 | 1 | 34 | 11 | 8 | 42 | 4 | 3 | 25 | 7 | 16 | 14 | 5 | 3 | 3 |
| 29 | 9 | 16 | 51 | 8 | 0 | 25 | 4 | 10 | 4 | 6 | 29 | 26 | 0 | 14 | 3 |
| 1730 | 1 | 21 | 26 | 0 | 10 | 35 | 1 | 27 | 1 | 5 | 20 | 3 | 7 | 20 | 30 |
| 1731 | 5 | 26 | 1 | 4 | 20 | 45 | 11 | 13 | 58 | 4 | 10 | 40 | 2 | 26 | 58 |
| 32 | 10 | 0 | 36 | 9 | 0 | 56 | 9 | 0 | 55 | 3 | 1 | 17 | 10 | 3 | 25 |
| 33 | 8 | 15 | 54 | 5 | 22 | 38 | 9 | 7 | 33 | 2 | 14 | 29 | 5 | 14 | 25 |
| 34 | 0 | 20 | 29 | 10 | 2 | 49 | 6 | 24 | 30 | 1 | 5 | 6 | 0 | 20 | 53 |
| 1735 | 4 | 25 | 4 | 2 | 12 | 59 | 4 | 11 | 27 | 11 | 25 | 43 | 7 | 27 | 20 |
| 1736 | 8 | 29 | 39 | 6 | 23 | 10 | 1 | 28 | 25 | 10 | 16 | 20 | 3 | 3 | 48 |
| 37 | 7 | 14 | 56 | 3 | 14 | 52 | 2 | 5 | 3 | 9 | 29 | 32 | 10 | 14 | 47 |
| 38 | 11 | 19 | 32 | 7 | 25 | 3 | 11 | 22 | 0 | 8 | 20 | 9 | 5 | 21 | 15 |
| 39 | 3 | 24 | 7 | 0 | 5 | 13 | 9 | 8 | 57 | 7 | 10 | 46 | 0 | 27 | 42 |
| 1740 | 7 | 28 | 42 | 4 | 15 | 23 | 6 | 25 | 54 | 6 | 1 | 23 | 8 | 4 | 10 |
| 1741 | 6 | 13 | 59 | 1 | 7 | 6 | 7 | 2 | 33 | 5 | 14 | 35 | 3 | 15 | 10 |
| 42 | 10 | 18 | 34 | 5 | 17 | 16 | 4 | 19 | 30 | 4 | 5 | 12 | 10 | 21 | 37 |
| 43 | 2 | 23 | 10 | 9 | 27 | 27 | 2 | 6 | 27 | 2 | 25 | 49 | 5 | 28 | 5 |
| 44 | 6 | 27 | 45 | 2 | 7 | 37 | 11 | 23 | 24 | 1 | 16 | 26 | 1 | 4 | 32 |
| 1745 | 5 | 13 | 2 | 10 | 29 | 20 | 0 | 0 | 3 | 0 | 29 | 38 | 8 | 15 | 32 |

## MEDII MOTUS SATELLITUM SATURNI IN ANNIS.

| Annis | Primi | | | Secundi | | | Tertii | | | Quarti | | | Quinti | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | s | o | ′ | s | o | ′ | s | o | ′ | s | o | ′ | s | o | ′ |
| 1 | 4 | 4 | 35 | 4 | 10 | 10 | 9 | 16 | 57 | 10 | 20 | 37 | 7 | 6 | 27 |
| 2 | 8 | 9 | 10 | 8 | 20 | 21 | 7 | 3 | 54 | 9 | 11 | 14 | 2 | 12 | 55 |
| 3 | 0 | 13 | 46 | 1 | 0 | 31 | 4 | 20 | 51 | 8 | 1 | 51 | 9 | 19 | 22 |
| 4 | 10 | 29 | 3 | 9 | 22 | 14 | 4 | 27 | 30 | 7 | 15 | 3 | 5 | 0 | 22 |
| 5 | 3 | 3 | 38 | 2 | 2 | 24 | 2 | 14 | 27 | 6 | 5 | 40 | 0 | 6 | 50 |
| 6 | 7 | 8 | 13 | 6 | 12 | 35 | 0 | 1 | 24 | 4 | 26 | 17 | 7 | 13 | 17 |
| 7 | 11 | 12 | 49 | 10 | 22 | 45 | 9 | 18 | 21 | 3 | 16 | 54 | 2 | 19 | 45 |
| 8 | 9 | 28 | 6 | 7 | 14 | 27 | 9 | 24 | 59 | 3 | 0 | 6 | 10 | 0 | 44 |
| 9 | 2 | 2 | 41 | 11 | 24 | 38 | 7 | 11 | 57 | 1 | 20 | 43 | 5 | 7 | 12 |
| 10 | 6 | 7 | 16 | 4 | 4 | 48 | 4 | 28 | 54 | 0 | 11 | 20 | 0 | 13 | 39 |
| 11 | 10 | 11 | 51 | 8 | 14 | 59 | 2 | 15 | 51 | 11 | 1 | 57 | 7 | 20 | 7 |
| 12 | 8 | 27 | 9 | 5 | 6 | 41 | 2 | 22 | 29 | 10 | 15 | 9 | 3 | 1 | 7 |
| 13 | 1 | 1 | 44 | 9 | 16 | 52 | 0 | 9 | 26 | 9 | 5 | 46 | 10 | 7 | 34 |
| 14 | 5 | 6 | 19 | 1 | 27 | 2 | 9 | 26 | 23 | 7 | 26 | 23 | 5 | 14 | 2 |
| 15 | 9 | 10 | 54 | 6 | 7 | 12 | 7 | 13 | 20 | 6 | 17 | 1 | 0 | 20 | 29 |
| 16 | 7 | 26 | 11 | 2 | 28 | 55 | 7 | 19 | 59 | 6 | 0 | 12 | 8 | 1 | 29 |
| 20 | 6 | 25 | 14 | 0 | 21 | 9 | 0 | 17 | 29 | 1 | 15 | 15 | 1 | 1 | 51 |
| 40 | 1 | 20 | 28 | 1 | 12 | 17 | 1 | 4 | 57 | 3 | 0 | 31 | 2 | 3 | 42 |
| 60 | 8 | 15 | 43 | 2 | 3 | 26 | 1 | 22 | 26 | 4 | 15 | 46 | 3 | 5 | 33 |
| 80 | 3 | 10 | 57 | 2 | 24 | 35 | 2 | 9 | 55 | 6 | 1 | 1 | 4 | 7 | 24 |

## MENSIBUS INEUNTIBUS.

| Mense | s | o | ′ | s | o | ′ | s | o | ′ | s | o | ′ | s | o | ′ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Feb. | 5 | 1 | 37 | 3 | 27 | 35 | 10 | 10 | 24 | 11 | 9 | 53 | 4 | 20 | 41 |
| Mart. | 3 | 1 | 9 | 6 | 20 | 33 | 0 | 21 | 44 | 8 | 12 | 3 | 8 | 27 | 45 |
| Apr. | 8 | 2 | 46 | 10 | 18 | 7 | 11 | 2 | 7 | 7 | 21 | 56 | 1 | 18 | 26 |
| Maii | 6 | 23 | 42 | 10 | 4 | 10 | 6 | 22 | 50 | 6 | 9 | 15 | 6 | 4 | 35 |
| Junii | 11 | 25 | 19 | 2 | 1 | 45 | 5 | 3 | 14 | 5 | 19 | 8 | 10 | 25 | 16 |
| Julii | 10 | 16 | 15 | 1 | 17 | 47 | 0 | 23 | 56 | 4 | 6 | 27 | 3 | 11 | 25 |
| Aug. | 3 | 17 | 52 | 5 | 15 | 22 | 11 | 4 | 20 | 3 | 16 | 20 | 8 | 2 | 6 |
| Sept. | 8 | 19 | 30 | 9 | 12 | 56 | 9 | 14 | 44 | 2 | 26 | 13 | 0 | 22 | 48 |
| Octob. | 7 | 10 | 25 | 8 | 28 | 59 | 5 | 5 | 27 | 1 | 13 | 32 | 5 | 8 | 56 |
| Nov. | 0 | 12 | 2 | 0 | 26 | 33 | 3 | 15 | 51 | 0 | 23 | 25 | 9 | 29 | 38 |
| Dec. | 11 | 2 | 58 | 0 | 12 | 36 | 11 | 6 | 33 | 11 | 10 | 44 | 2 | 15 | 46 |

## *MEDII MOTVS SATELLITVM SATVRNI IN DIEBVS.*

| *Diebus.* | *Primi* | | | *Secundi* | | | *Tertii* | | | *Quarti* | | | *Quinti* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *s* | *o* | *′* | *s* | *o* | *′* | *s* | *o* | *′* | *s* | *o* | *′* | *s* | *o* | *′* |
| 0 | | | | | | | | | | | | | | | |
| 1 | 6 | 10 | 42 | 4 | 11 | 32 | 2 | 19 | 41 | 0 | 22 | 35 | 0 | 4 | 32 |
| 2 | 0 | 21 | 24 | 8 | 23 | 4 | 5 | 9 | 23 | 1 | 15 | 9 | 0 | 9 | 5 |
| 3 | 7 | 2 | 6 | 1 | 4 | 36 | 7 | 29 | 4 | 2 | 7 | 44 | 0 | 13 | 37 |
| 4 | 1 | 12 | 47 | 5 | 16 | 8 | 10 | 18 | 46 | 3 | 0 | 18 | 0 | 18 | 9 |
| 5 | 7 | 23 | 29 | 9 | 27 | 40 | 1 | 8 | 27 | 3 | 22 | 53 | 0 | 22 | 41 |
| 6 | 2 | 4 | 11 | 2 | 9 | 12 | 3 | 28 | 8 | 4 | 15 | 28 | 0 | 27 | 14 |
| 7 | 8 | 14 | 53 | 6 | 20 | 45 | 6 | 17 | 50 | 5 | 8 | 2 | 1 | 1 | 46 |
| 8 | 2 | 25 | 35 | 11 | 2 | 17 | 9 | 7 | 31 | 6 | 0 | 37 | 1 | 6 | 18 |
| 9 | 9 | 6 | 17 | 3 | 13 | 49 | 11 | 27 | 13 | 6 | 23 | 12 | 1 | 10 | 51 |
| 10 | 3 | 16 | 58 | 7 | 25 | 21 | 2 | 16 | 54 | 7 | 15 | 46 | 1 | 15 | 23 |
| 11 | 9 | 27 | 40 | 0 | 6 | 53 | 5 | 6 | 36 | 8 | 8 | 21 | 1 | 19 | 55 |
| 12 | 4 | 8 | 22 | 4 | 18 | 25 | 7 | 26 | 17 | 9 | 0 | 55 | 1 | 24 | 28 |
| 13 | 10 | 19 | 4 | 8 | 29 | 57 | 10 | 15 | 58 | 9 | 23 | 30 | 1 | 29 | 0 |
| 14 | 4 | 29 | 46 | 1 | 11 | 29 | 1 | 5 | 40 | 10 | 16 | 5 | 2 | 3 | 32 |
| 15 | 11 | 10 | 28 | 5 | 23 | 1 | 3 | 25 | 21 | 11 | 8 | 39 | 2 | 8 | 4 |
| 16 | 5 | 21 | 10 | 10 | 4 | 33 | 6 | 15 | 3 | 0 | 1 | 14 | 2 | 12 | 37 |
| 17 | 0 | 1 | 51 | 2 | 16 | 5 | 9 | 4 | 44 | 0 | 23 | 49 | 2 | 17 | 9 |
| 18 | 6 | 12 | 33 | 6 | 27 | 37 | 11 | 24 | 25 | 1 | 16 | 23 | 2 | 21 | 41 |
| 19 | 0 | 23 | 15 | 11 | 9 | 10 | 2 | 14 | 7 | 2 | 8 | 58 | 2 | 26 | 14 |
| 20 | 7 | 3 | 57 | 3 | 20 | 42 | 5 | 3 | 48 | 3 | 1 | 32 | 3 | 0 | 46 |
| 21 | 1 | 14 | 39 | 8 | 2 | 14 | 7 | 23 | 30 | 3 | 24 | 7 | 3 | 5 | 18 |
| 22 | 7 | 25 | 21 | 0 | 13 | 46 | 10 | 13 | 11 | 4 | 16 | 42 | 3 | 9 | 50 |
| 23 | 2 | 6 | 3 | 4 | 25 | 18 | 1 | 2 | 53 | 5 | 9 | 16 | 3 | 14 | 23 |
| 24 | 8 | 16 | 44 | 9 | 6 | 50 | 3 | 22 | 34 | 6 | 1 | 51 | 3 | 18 | 55 |
| 25 | 2 | 27 | 26 | 1 | 18 | 22 | 6 | 12 | 15 | 6 | 24 | 26 | 3 | 23 | 27 |
| 26 | 9 | 8 | 8 | 5 | 29 | 54 | 9 | 1 | 57 | 7 | 17 | 0 | 3 | 28 | 0 |
| 27 | 3 | 18 | 50 | 10 | 11 | 26 | 11 | 21 | 38 | 8 | 9 | 35 | 4 | 2 | 32 |
| 28 | 9 | 29 | 32 | 2 | 22 | 58 | 2 | 11 | 20 | 9 | 2 | 9 | 4 | 7 | 4 |
| 29 | 4 | 10 | 14 | 7 | 4 | 30 | 5 | 1 | 1 | 9 | 24 | 44 | 4 | 11 | 37 |
| 30 | 10 | 20 | 55 | 11 | 16 | 2 | 7 | 20 | 42 | 10 | 17 | 19 | 4 | 16 | 9 |
| 31 | 5 | 1 | 37 | 3 | 27 | 35 | 10 | 10 | 24 | 11 | 9 | 53 | 4 | 20 | 41 |

*In Anno* Biſſextili *poſt* Februarium *adde unius Diei Motum.*

## *MEDII MOTUS SATELLITUM SATURNI IN HORIS.*

| Hor. | Primi | | | Secundi | | | Tertii | | | Quarti | | | Quinti | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S | o | ′ | S | o | ′ | S | o | ′ | o | ′ | ″ | o | ′ | ″ |
| 0 | | | | | | | | | | | | | | | |
| 1 | 0 | 7 | 57 | 0 | 5 | 29 | 0 | 3 | 19 | 0 | 56 | 26 | 0 | 11 | 20 |
| 2 | 0 | 15 | 53 | 0 | 10 | 58 | 0 | 6 | 38 | 1 | 52 | 53 | 0 | 22 | 41 |
| 3 | 0 | 23 | 50 | 0 | 16 | 26 | 0 | 9 | 58 | 2 | 49 | 19 | 0 | 34 | 2 |
| 4 | 1 | 1 | 47 | 0 | 21 | 55 | 0 | 13 | 17 | 3 | 45 | 46 | 0 | 45 | 23 |
| 5 | 1 | 9 | 44 | 0 | 27 | 24 | 0 | 16 | 36 | 4 | 42 | 12 | 0 | 56 | 44 |
| 6 | 1 | 17 | 40 | 1 | 2 | 53 | 0 | 19 | 55 | 5 | 38 | 39 | 1 | 8 | 5 |
| 7 | 1 | 25 | 37 | 1 | 8 | 22 | 0 | 23 | 15 | 6 | 35 | 6 | 1 | 19 | 25 |
| 8 | 2 | 3 | 34 | 1 | 13 | 51 | 0 | 26 | 34 | 7 | 31 | 33 | 1 | 30 | 46 |
| 9 | 2 | 11 | 31 | 1 | 19 | 20 | 0 | 29 | 53 | 8 | 27 | 59 | 1 | 42 | 7 |
| 10 | 2 | 19 | 27 | 1 | 24 | 48 | 1 | 3 | 12 | 9 | 24 | 26 | 1 | 53 | 27 |
| 11 | 2 | 27 | 24 | 2 | 0 | 17 | 1 | 6 | 31 | 10 | 20 | 52 | 2 | 4 | 48 |
| 12 | 3 | 5 | 21 | 2 | 5 | 46 | 1 | 9 | 51 | 11 | 17 | 19 | 2 | 16 | 8 |
| 13 | 3 | 13 | 18 | 2 | 11 | 15 | 1 | 13 | 10 | 12 | 13 | 45 | 2 | 27 | 29 |
| 14 | 3 | 21 | 14 | 2 | 16 | 44 | 1 | 16 | 29 | 13 | 10 | 11 | 2 | 38 | 50 |
| 15 | 3 | 29 | 11 | 2 | 22 | 13 | 1 | 19 | 48 | 14 | 6 | 37 | 2 | 50 | 11 |
| 16 | 4 | 7 | 8 | 2 | 27 | 41 | 1 | 23 | 8 | 15 | 3 | 4 | 3 | 1 | 31 |
| 17 | 4 | 15 | 5 | 3 | 3 | 10 | 1 | 26 | 27 | 15 | 59 | 31 | 3 | 12 | 52 |
| 18 | 4 | 23 | 1 | 3 | 8 | 39 | 1 | 29 | 46 | 16 | 55 | 58 | 3 | 24 | 12 |
| 19 | 5 | 0 | 58 | 3 | 14 | 8 | 2 | 3 | 5 | 17 | 52 | 24 | 3 | 35 | 32 |
| 20 | 5 | 8 | 55 | 3 | 19 | 37 | 2 | 6 | 24 | 18 | 48 | 51 | 3 | 46 | 53 |
| 21 | 5 | 16 | 52 | 3 | 25 | 6 | 2 | 9 | 44 | 19 | 45 | 18 | 3 | 58 | 14 |
| 22 | 5 | 24 | 48 | 4 | 0 | 34 | 2 | 13 | 3 | 20 | 41 | 44 | 4 | 9 | 35 |
| 23 | 6 | 2 | 45 | 4 | 6 | 3 | 2 | 16 | 22 | 21 | 38 | 10 | 4 | 20 | 56 |
| 24 | 6 | 10 | 42 | 4 | 11 | 32 | 2 | 19 | 41 | 22 | 34 | 37 | 4 | 32 | 17 |
| 25 | 6 | 18 | 39 | 4 | 17 | 1 | 2 | 23 | 1 | 23 | 31 | 3 | 4 | 43 | 38 |
| 26 | 6 | 26 | 35 | 4 | 22 | 30 | 2 | 26 | 20 | 24 | 27 | 30 | 4 | 54 | 58 |
| 27 | 7 | 4 | 32 | 4 | 27 | 59 | 2 | 29 | 39 | 25 | 23 | 56 | 5 | 6 | 19 |
| 28 | 7 | 12 | 29 | 5 | 3 | 27 | 3 | 2 | 58 | 26 | 20 | 23 | 5 | 17 | 40 |
| 29 | 7 | 20 | 26 | 5 | 8 | 56 | 3 | 6 | 18 | 27 | 16 | 49 | 5 | 29 | 1 |
| 30 | 7 | 28 | 22 | 5 | 14 | 25 | 3 | 9 | 37 | 28 | 13 | 15 | 5 | 40 | 22 |

# *MEDII MOTUS SATELLITUM SATURNI IN MINUTIS HORARIIS.*

| Sec. Min. | Satell. I. ° ′ | Satell. II. ° ′ | Satell. III. ° ′ | Satell. IV. ′ ″ | Satell. V. ′ ″ | Sec. Min. | Satell. I. ° ′ | Satell. II. ° ′ | Satell. III. ° ′ | Satell. IV. ′ ″ | Satell. V. ′ ″ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 8 | 0 5 | 0 3 | 0 56 | 0 11 | 31 | 4 6 | 2 50 | 1 43 | 29 10 | 5 52 |
| 2 | 0 16 | 0 11 | 0 7 | 1 53 | 0 23 | 32 | 4 14 | 2 55 | 1 46 | 30 6 | 6 3 |
| 3 | 0 24 | 0 16 | 0 10 | 2 49 | 0 34 | 33 | 4 22 | 3 1 | 1 50 | 31 3 | 6 14 |
| 4 | 0 32 | 0 22 | 0 13 | 3 46 | 0 45 | 34 | 4 30 | 3 6 | 1 53 | 32 0 | 6 26 |
| 5 | 0 40 | 0 27 | 0 17 | 4 42 | 0 57 | 35 | 4 38 | 3 12 | 1 56 | 32 57 | 6 37 |
| 6 | 0 48 | 0 33 | 0 20 | 5 39 | 1 8 | 36 | 4 46 | 3 17 | 2 0 | 33 54 | 6 48 |
| 7 | 0 56 | 0 38 | 0 23 | 6 35 | 1 19 | 37 | 4 54 | 3 23 | 2 3 | 34 50 | 7 0 |
| 8 | 1 4 | 0 44 | 0 27 | 7 31 | 1 30 | 38 | 5 2 | 3 28 | 2 6 | 35 46 | 7 11 |
| 9 | 1 12 | 0 49 | 0 30 | 8 28 | 1 42 | 39 | 5 10 | 3 34 | 2 9 | 36 42 | 7 22 |
| 10 | 1 19 | 0 55 | 0 33 | 9 24 | 1 53 | 40 | 5 18 | 3 39 | 2 13 | 37 38 | 7 34 |
| 11 | 1 27 | 1 0 | 0 37 | 10 20 | 2 5 | 41 | 5 26 | 3 45 | 2 16 | 38 34 | 7 45 |
| 12 | 1 35 | 1 6 | 0 40 | 11 17 | 2 16 | 42 | 5 34 | 3 50 | 2 19 | 39 30 | 7 56 |
| 13 | 1 43 | 1 11 | 0 43 | 12 14 | 2 28 | 43 | 5 42 | 3 56 | 2 23 | 40 27 | 8 8 |
| 14 | 1 51 | 1 17 | 0 46 | 13 10 | 2 39 | 44 | 5 50 | 4 1 | 2 26 | 41 23 | 8 19 |
| 15 | 1 59 | 1 22 | 0 50 | 14 7 | 2 50 | 45 | 5 58 | 4 7 | 2 29 | 42 20 | 8 30 |
| 16 | 2 7 | 1 28 | 0 53 | 15 3 | 3 1 | 46 | 6 5 | 4 12 | 2 33 | 43 16 | 8 42 |
| 17 | 2 15 | 1 33 | 0 56 | 16 0 | 3 13 | 47 | 6 13 | 4 18 | 2 36 | 44 13 | 8 53 |
| 18 | 2 23 | 1 39 | 1 0 | 16 56 | 3 24 | 48 | 6 21 | 4 23 | 2 39 | 45 10 | 9 4 |
| 19 | 2 31 | 1 44 | 1 3 | 17 52 | 3 36 | 49 | 6 29 | 4 29 | 2 43 | 46 6 | 9 16 |
| 20 | 2 39 | 1 50 | 1 6 | 18 49 | 3 47 | 50 | 6 37 | 4 34 | 2 46 | 47 2 | 9 27 |
| 21 | 2 47 | 1 55 | 1 10 | 19 46 | 3 58 | 51 | 6 45 | 4 40 | 2 49 | 47 58 | 9 38 |
| 22 | 2 55 | 2 1 | 1 13 | 20 42 | 4 9 | 52 | 6 53 | 4 45 | 2 53 | 48 54 | 9 50 |
| 23 | 3 3 | 2 6 | 1 16 | 21 38 | 4 21 | 53 | 7 1 | 4 50 | 2 56 | 49 51 | 10 1 |
| 24 | 3 11 | 2 12 | 1 20 | 22 35 | 4 32 | 54 | 7 9 | 4 56 | 2 59 | 50 48 | 10 12 |
| 25 | 3 19 | 2 17 | 1 23 | 23 31 | 4 45 | 55 | 7 17 | 5 1 | 3 3 | 51 44 | 10 23 |
| 26 | 3 27 | 2 22 | 1 26 | 24 27 | 4 55 | 56 | 7 25 | 5 7 | 3 6 | 52 40 | 10 35 |
| 27 | 3 35 | 2 28 | 1 30 | 25 24 | 5 6 | 57 | 7 33 | 5 12 | 3 9 | 53 37 | 10 46 |
| 28 | 3 42 | 2 33 | 1 33 | 26 20 | 5 17 | 58 | 7 41 | 5 18 | 3 13 | 54 34 | 10 58 |
| 29 | 3 50 | 2 39 | 1 36 | 27 17 | 5 29 | 59 | 7 49 | 5 23 | 3 16 | 55 30 | 11 9 |
| 30 | 3 58 | 2 44 | 1 40 | 28 13 | 5 40 | 60 | 7 57 | 5 29 | 3 19 | 56 26 | 11 20 |

# TABULA LATITUDINARIA SATELLITUM SATURNI.

| Argument. Latitudinis. | Sig. 0. *Bor.* 6. *Aust.* | | | | Sig. 1. *Bor.* 7. *Aust.* | | | | Sig. 2. *Bor.* 8. *Aust.* | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Satellitum I. II. III. IV. | | Satellitis V. | | Satellitum I. II. III. IV. | | Satellitis V. | | Satellitum I. II. III. IV. | | Satellitis V. | | |
| | *Inclinat.* | *Reduct.* | *Inclin.* | *Reduct.* | *Inclinat.* | *Reduct.* | *Inclinat.* | *Reduct.* | *Inclinat.* | *Reduct.* | *Inclinat.* | *Reduct.* | |
| *Gr.* | ° ′ | ° ′ | ° ′ | ° ′ | ° ′ | ° ′ | ° ′ | ° ′ | ° ′ | ° ′ | ° ′ | ° ′ | |
| 0 | 0 0 | 0 0 | 0 0 | 0 0 | 14 29 | 3 26 | 7 26 | 0 51 | 25 39 | 3 41 | 12 57 | 0 52 | 30 |
| 1 | 0 30 | 0 8 | 0 15 | 0 2 | 14 55 | 3 31 | 7 40 | 0 52 | 25 56 | 3 37 | 13 5 | 0 51 | 29 |
| 2 | 1 0 | 0 16 | 0 31 | 0 4 | 15 22 | 3 35 | 7 53 | 0 53 | 26 12 | 3 33 | 13 13 | 0 50 | 28 |
| 3 | 1 30 | 0 24 | 0 46 | 0 6 | 15 48 | 3 39 | 8 6 | 0 54 | 26 27 | 3 28 | 13 20 | 0 49 | 27 |
| 4 | 2 0 | 0 32 | 1 2 | 0 8 | 16 14 | 3 42 | 8 19 | 0 55 | 26 42 | 3 23 | 13 27 | 0 47 | 26 |
| 5 | 2 30 | 0 40 | 1 17 | 0 10 | 16 40 | 3 46 | 8 32 | 0 55 | 26 57 | 3 18 | 13 34 | 0 46 | 25 |
| 6 | 3 0 | 0 48 | 1 33 | 0 12 | 17 5 | 3 49 | 8 45 | 0 56 | 27 11 | 3 12 | 13 41 | 0 45 | 24 |
| 7 | 3 30 | 0 56 | 1 48 | 0 14 | 17 31 | 3 52 | 8 58 | 0 57 | 27 24 | 3 7 | 13 47 | 0 44 | 23 |
| 8 | 3 59 | 1 4 | 2 4 | 0 16 | 17 56 | 3 55 | 9 10 | 0 57 | 27 37 | 3 1 | 13 53 | 0 42 | 22 |
| 9 | 4 29 | 1 12 | 2 19 | 0 18 | 18 21 | 3 58 | 9 22 | 0 58 | 27 49 | 2 55 | 13 59 | 0 41 | 21 |
| 10 | 4 59 | 1 19 | 2 34 | 0 20 | 18 45 | 4 0 | 9 35 | 0 58 | 28 2 | 2 48 | 14 4 | 0 39 | 20 |
| 11 | 5 28 | 1 27 | 2 50 | 0 22 | 19 9 | 4 2 | 9 47 | 0 59 | 28 13 | 2 41 | 14 10 | 0 37 | 19 |
| 12 | 5 58 | 1 34 | 3 5 | 0 24 | 19 33 | 4 3 | 9 58 | 0 59 | 28 24 | 2 34 | 14 15 | 0 35 | 18 |
| 13 | 6 27 | 1 42 | 3 20 | 0 26 | 19 56 | 4 5 | 10 10 | 0 59 | 28 34 | 2 27 | 14 20 | 0 34 | 17 |
| 14 | 6 57 | 1 49 | 3 35 | 0 27 | 20 20 | 4 6 | 10 21 | 0 59 | 28 44 | 2 19 | 14 24 | 0 32 | 16 |
| 15 | 7 26 | 1 56 | 3 50 | 0 29 | 20 43 | 4 6 | 10 33 | 0 59 | 28 53 | 2 12 | 14 28 | 0 30 | 15 |
| 16 | 7 55 | 2 3 | 4 5 | 0 31 | 21 5 | 4 7 | 10 44 | 0 59 | 29 1 | 2 4 | 14 32 | 0 28 | 14 |
| 17 | 8 24 | 2 10 | 4 20 | 0 33 | 21 27 | 4 7 | 10 55 | 0 59 | 29 9 | 1 56 | 14 36 | 0 27 | 13 |
| 18 | 8 53 | 2 17 | 4 35 | 0 34 | 21 49 | 4 7 | 11 6 | 0 59 | 29 17 | 1 47 | 14 40 | 0 25 | 12 |
| 19 | 9 22 | 2 24 | 4 50 | 0 36 | 22 10 | 4 6 | 11 16 | 0 59 | 29 24 | 1 39 | 14 43 | 0 23 | 11 |
| 20 | 9 51 | 2 30 | 5 5 | 0 38 | 22 31 | 4 6 | 11 26 | 0 59 | 29 30 | 1 30 | 14 46 | 0 21 | 10 |
| 21 | 10 19 | 2 37 | 5 19 | 0 39 | 22 52 | 4 5 | 11 36 | 0 58 | 29 35 | 1 22 | 14 49 | 0 19 | 9 |
| 22 | 10 48 | 2 43 | 5 34 | 0 41 | 23 12 | 4 3 | 11 46 | 0 58 | 29 41 | 1 13 | 14 51 | 0 17 | 8 |
| 23 | 11 16 | 2 49 | 5 48 | 0 43 | 23 32 | 4 2 | 11 56 | 0 57 | 29 45 | 1 4 | 14 53 | 0 15 | 7 |
| 24 | 11 44 | 2 55 | 6 2 | 0 44 | 23 51 | 4 0 | 12 5 | 0 57 | 29 49 | 0 55 | 14 55 | 0 13 | 6 |
| 25 | 12 12 | 3 1 | 6 17 | 0 45 | 24 11 | 3 58 | 12 14 | 0 56 | 29 52 | 0 46 | 14 56 | 0 11 | 5 |
| 26 | 12 40 | 3 6 | 6 31 | 0 46 | 24 29 | 3 55 | 12 23 | 0 56 | 29 55 | 0 37 | 14 57 | 0 9 | 4 |
| 27 | 13 7 | 3 11 | 6 45 | 0 48 | 24 47 | 3 52 | 12 32 | 0 55 | 29 57 | 0 28 | 14 58 | 0 7 | 3 |
| 28 | 13 34 | 3 16 | 6 59 | 0 49 | 25 5 | 3 49 | 12 41 | 0 54 | 29 59 | 0 19 | 14 59 | 0 4 | 2 |
| 29 | 14 2 | 3 21 | 7 12 | 0 50 | 25 22 | 3 45 | 12 49 | 0 53 | 30 0 | 0 10 | 15 0 | 0 2 | 1 |
| 30 | 14 29 | 3 26 | 7 26 | 0 51 | 25 39 | 3 41 | 12 57 | 0 52 | 30 0 | 0 0 | 15 0 | 0 0 | 0 |
| | Sig. 11. *Aust.* 5. *Bor.* | | | | Sig. 10. *Aust.* 4. *Bor.* | | | | Sig. 9. *Aust.* 3. *Bor.* | | | | *Gr.* |

# De *Tabulis Satellitum* Saturni.

HÆ Tabulæ motuum Satellitum *Saturni* meræ *Caſſinianæ* ſunt, ad Meridianum *Londinenſem* ſtylumq; *Julianum* redactæ, quas inter *Acta Academiæ Regiæ Pariſienſis* Anni 1716, præſtantiſſimus *Aſtronomus* D. *Jacobus Caſſinus* nunc primum edidit, quaſque noſtris in *Philoſophica Tranſact.* N° 356, utpote raptim confectis, merito prætulimus. Abunde quidem ſufficiunt Tabulæ ad diſtinguendos inter ſe Satellites, & ad eorum Loca juxta *Saturnum* indigitanda, qui aliàs ob parvitatem, oculis hebetioribus, ni rectè collimant, ægre in conſpectum venirent: Nondum tamen eas ultimam Celeberrimi Authoris manum recepiſſe conſtat; ſed potius Publico donari, ut earum ope commode prævideant *Aſtronomi* eas obſervandi opportunitates, quæ ad emendendam Theoriam motuum plurimum conferre poterunt.

Supponuntur autem Periodi horum Satellitum, quibus revolvuntur ad Æquinoctium, ſive ad principium *Arietis*, ſcilicet

*Primi* ſive *Intimi* $1^{D.}\ 21^{H.}\ 18'\ 27''$. *Secundi Penintimi* $2^{D.}\ 17^{H.}\ 41'\ 22''$. *Tertii* ſive *Medii* $4^{D.}\ 12^{H.}\ 25'\ 12''$. *Quarti* Hugeniani $15^{D.}\ 22^{H.}\ 41'\ 12''$. *Quinti* ſive *Extimi* $79^{D.}\ 7^{H.}\ 47'\ 0''$. Poſito autem, (juxta Regulam Naturæ ſaltem in hoc noſtro Syſtemate univerſalem, quæq; tam in Jovialium ac Lunæ motibus, quam Planetarum primariorum circa Solem obtinet) Vires centrum *Saturni* petentes eſſe in duplicata ratione Diſtantiarum reciprocè, atq; adeo Cubos Diſtantiarum a Centro ejus eſſe ut quadrata Temporum Periodicorum; ex data Diſtantiâ & Periodo *Quarti*, reliquorum Diſtantiæ conſequuntur.

Nuperis autem Obſervationibus, ingenti radio Teleſcopii *Regalis Societatis* 120 Pedes ſuperante, ope Micrometri artificioſiſſimi, invenit *D. Pound* rationem Diſtantiæ Satellitis *Quarti* & maximi a centro *Saturni*, ad Semidiametrum *Annuli* ejus ut 374 ad 43, ſive ut 8,7 ad 1 proxime; rationem vero Diametri *Annuli* ad illam *Globi* eſſe ut 7 ad 3. Proinde inito Calculo proveniunt Diſtantiæ ut ſequitur.

| | *Semidiam. Annuli.* | *Semidiam. Globi* ♄. | | *Semidiam. Annuli.* | *Semidiam. Globi* ♄. |
|---|---|---|---|---|---|
| *Primi* | 2,097 | 4,893 | *Quarti* | 8,698 | 20,295 |
| *Secundi* | 2,686 | 6,268 | *Quinti* | 25,348 | 59,154 |
| *Tertii* | 3,752 | 8,754 | | | |

*Maii* autem 29°. $10^{h.}$ hujus Anni 1719 *St. Vet.* eodem Obſervatore ac Inſtrumentis, viſus eſt *Quartus* in maxima fere ejus a Planeta digreſſione orientali, diſtare a Centro *Saturni*, tunc ♎ 7°. 41'. occupantis, tria Minuta prima cum ſeptem Secundis. Unde computo rite inſtituto, fit ratio Diſtantiæ hujus Satellitis a *Saturno* ad Diſtantiam *Solis* a *Terra*, ut 8,25 ad 1000, e quâ cæterorum Diſtantiæ æſtimari poterunt.

Sup-

Supponit autem D. *Caſſinus* Satellites quatuor Interiores ſecundum Planum *Annuli* moveri, ſive eorum Orbitas ad Planum Orbis *Saturni* angulo triginta graduum Inclinari: *Saturno* enim juxta medium Sign. *Geminorum* & *Sagittarii* exiſtente, Annuli tum latiſſime patentis Axis major ſatis præciſe duplus invenitur minoris, ac Ellipſes ſemper Annulari ſimiles deſcribere videntur hi Satellites; inq; maximis ſuis a Planeta digreſſionibus, in Axe majori Annuli producto reperiuntur: quæ quidem fieri nequeunt, ni Satellitum Orbes cum Annuli Plano eundem propemodum ſitum haberent.

Nuper vero *Annuli Nodos*, præſtantiſſimis Teleſcopiis & Oculis ſane pluſquam Lynceis, perſcrutatus eſt præclarus *Aſtronomus* D. *Maraldus*; ut in *Actis Acad. Reg. Pariſienſis* Annorum 1715 & 1716 videre eſt. Demonſtrat enim Obſervationibus perquam ſubtilibus, Planum Annuli Anno 1715 interſecaſſe Planum Orbis *Saturni* ad Grad. 9°. 45 Min. *Virginis* & *Piſcium*; ac conceſſo Inclinationis Angulo 30 Grad. idem Annuli Planum cum Plano *Eclipticæ* ſive Orbe *Terræ* occurriſſe ad 16°÷ ♍ & ♓, ſub Inclinatione 31°. 20′.

Ut itaq; ad datum Tempus cognoſcantur accuratè tam *Ellipſeos Annularis*, quam earum quas Satellites deſcribunt, Poſitio, Species punctumq; vere *Apogæum* & *Perigæum*, reſolvendum eſt Triangulum Sphæricum obliquangulum, modo inter Præcepta Calculi Latitudinum Jovialium ſupra monſtrato.

Cum autem Latitudo *Terræ* reſpectu Orbis *Saturni* vix unquam excedat quartam gradus partem, ea in hoc negotio, hactenus parum explorato, tuto negligi poteſt, quaſi in eodem Plano moveretur uterq; Planeta. Proinde è loco Geocentrico *Saturni* ſubducantur 5 *Sig.* 19°. 45′, ac reſtabit Argumentum Latitudinis; cum quo, in *Tabulâ Latitudinariâ Satellitum* I. II. III. IV, capiatur Inclinatio, qui eſt Angulus quo radius viſualis a *Terrâ* ad *Saturnum* ductus ſuper Orbes Satellitum illorum inclinatur; cujuſq; Sinus eſt ad Radium ut minores Orbium apparentium Diametri ad majores: Ejuſdemq; Speciei fit *Ellipſis Annuli*, Semicirculo Apogæo *Boream* reſpiciente ſi Argumentum Latitudinis minus ſit ſex Signis, *Auſtrum* vero ſi majus. Addidimus etiam *Tabulam Reductionum*, ad cognitionem veri Apogæi Satellitum, in tantâ Planorum Inclinatione, neceſſario requiſitam.

*Quintum* autem & exteriorem Satellitem in Orbe a cæteris multum diverſo circumferri, nuper deprehendit laudatus D. *Caſſinus*; Nodo ejus Aſcendente apud 5°. 00′ ♍ reperto, cum Angulo Inclinationis 15° tantum graduum, ſive prioris dimidio. Quapropter huic etiam Tabulam Inclinationum & Reductionum accommodavimus.

*SYNOP-*

SYNOPSIS ASTRONOMIÆ

# COMETICÆ.

QUA

## *COMETARUM*

Hactenus debite obſervatorum

*Motus in Orbe Parabolico*

REPRÆSENTANTUR:

EORUMQUE

Qui Annis MDCLXXX & MDCLXXXII fulſêre

Poſt certas Periodos redeuntium,

*Motus in Orbibus Ellipticis*

accurato calculo ſubjiciuntur.

# SYNOPSIS
# COMMENTATIONUM
## QUÆ
Hactenus deinde celebratarum
## Motus in Orbe Parabolico
PERFICIENTIUM
EORUMQUE
Qui Annis MDCCLXXX & MDCCLXXXII editæ
Vires curas Laplacios reclamitant,
Motus in Orbibus Elliptico
Ellipticis inducendum

# SYNOPSIS
## ASTRONOMIÆ COMETICÆ.

VETERES *Ægyptii* & *Chaldæi*, ſiqua fides *Diodoro Siculo*, longa obſervationum ſerie inſtructi, Cometarum ἐπιπλοὰς prænuntiare valuerunt. Cum autem iiſdem artibus etiam Terræ-motus ac Tempeſtates prævidiſſe dicantur, extra dubium eſt Aſtrologiæ potius calculo fatidico, quam Aſtronomicis motuum Theoriis eorum de his rebus ſcientiam referendam eſſe. Ac vix alia à *Græcis* utriuſque populi victoribus reperta eſt apud eos doctrina; adeo ut eam, quam nunc eouſque proveximus Aſtronomiam, *Græcis* ipſis, præſertim magno *Hipparcho*, uti Inventoribus, acceptam debeamus. Apud hos vero *Ariſtotelis* ſententia, qui Cometas nihil aliud eſſe voluit quam Vapores ſublunares vel etiam Meteora aerea, tantum effecit, ut hæc Aſtronomicæ ſcientiæ pars longe ſubtiliſſima, omnino neglecta manſerit; cum nemini operæ pretium viſum fuerit, vagas & incertas fluitantium in æthere vaporum ſemitas adnotare ſcriptiſque mandare; unde factum ut ab illis nihil certi de motu Cometarum ad nos tranſmiſſum reperiatur.

*Seneca* autem Philoſophus, perpenſis duorum inſignium ſui temporis Cometarum Phænomenis, non dubitavit iis loca inter Corpora cœleſtia aſſignare, Sydera eſſe cum Mundo duratura exiſtimans, quanquam Motus eorum legibus nondum compertis regi faſeatur. Tandemque Vaticinio non irrito promittit, aliquando futura ſecula, quibus hæc tam occulta *dies extraheret ac longioris ævi diligentia*; quibuſque admirationi foret hæc *Veteres* neſcire potuiſſe; poſtquam *Demonſtraverit aliquis* Naturæ Interpres *in quibus Cœli partibus Cometæ errent, quanti qualeſque ſint.* Ab hac autem *Senecæ* ſententia in diverſas partes abiit pene omnis Aſtronomorum cohors; ac ipſe *Seneca* neque Phænomena Motus quibus opinionem hanc tueretur, neque tempora adſcribere dignatus eſt, quæ Poſteris ad hæc definienda uſui forent. Ac evolutis plurimis Cometarum Hiſtoriis, nihil omnino invenio quod huic negotio inſervire poſſit, ante annum à *Chriſto* nato 1337, quo *Nicephorus Gregoras* Hiſtoricus & Aſtronomus *Conſtantinopolitanus* nobis Cometæ ſemitam inter Fixas ſatis accurate deſcripſit; Tempora autem nimis laxe conſignavit, ita ut non niſi quod abhinc quadringentis pene Annis apparuerit, lubricus & incertus hic Cometa Catalogo quem

damus

damus inferi mereatur. Dein Cometa Anni 1472 omnium velociſſimus ac terris proximus *Regiomontanum* habuit obſervatorem. Hic magnitudine ac Comâ terribilis, unius diei ſpatio 40 gradus ſub circulo Cœli maximo emenſus eſt, ac omnium primus eſt de quo obſervata idonea ad nos pervenêre. Quotquot autem Cometas conſiderarunt, uſque ad tempora *Tychonis Brahe* magni illius Aſtronomiæ reſtauratoris, eos ſublunares eſſe autumârunt, adeoq; parvi penderunt, utpote pro Vaporibus habitos.

Anno autem 1577, *Tychone* jam ſtudio Aſtrorum ſerio incumbente, comparatiſque Machinis ingentibus pro dimetiendis cœli arcubus, majori cum cura & certitudine quam Veteribus ſperare fas erat; emerſit Cometa ſatis conſpicuus, cui obſervando ſtrenue ſeſe accinxit *Tycho*: multiſque & fidis Experimentis deprehendit, nulli quæ ſentiretur Parallaxi diurnæ obnoxium fuiſſe, adeoque non tantum non fuiſſe Vaporem aereum, ſed & etiam multo ſuperiorem extitiſſe Lunâ: Imo nihil obſtabat, quin inter ipſos Planetas collocaretur; fruſtra interim contra obſtrepentibus Scholaſticorum nonnullis.

*Tychonis* vero eximiam in obſervando induſtriam excepit *Kepleri* ſagaciſſimum & pene divinum ingenium. Hic *Tychonis* laboribus fretus Syſtema Mundi verum & Phyſicum adinvenit, ac ſcientiam Aſtronomicam in immenſum auxit; Monſtrato ſc. Planetas omnes in Planis per Solis centrum tranſeuntibus revolvi, Curvaſque Ellipticas deſcribere, ea lege, ut Areæ Sectorum Ellipticorum, ad centrum Solis in Ellipſeos foco conſtituti, temporibus quibus deſcribantur arcus ſemper proportionales ſint. Invenit etiam Diſtantias Planetarum à Sole eſſe in ſeſquialtera ratione Temporum periodicorum, ſive Cubos Diſtantiarum eſſe ut Quadrata Temporum. Tanto autem Artifici affulſere duo Cometæ, quorum alter maxime illuſtris. Ex horum obſervatis concluſit *Keplerus*, non uno Parallaxis annuæ indicio, Cometas inter Orbes Planetarum liberrime quaquaverſum ferri, motu quidem non multum à rectilineo diverſo, ſed quem nondum definire licuit. Ac *Hevelius Tychonis* æmulus, *Kepleri* veſtigiis inſiſtens, eandem Hypotheſim Motus rectilinei amplexus eſt, ipſe plurium Cometarum Obſervator perquam ſubtilis. Cum Cœlo tamen Calculum ſuum non penitus conſentire queſtus eſt, Viamque Cometicam verſus Solem incurvari ſuboluit.

Tandem de ſummo Cœlo lapſus eſt prodigioſus ille Cometa Anni 1680, quaſi Caſu perpendiculari Solem petens, & exinde pari cum velocitate aſſurgens: Hic per quatuor Menſes continuos viſus, inſigni ac peculiari Curvitate Orbitæ ad inveſtigationem Motus Theoriæ præ cæteris idoneus erat: Inſtructis autem jampridem Regiis Obſervatoriis, *Pariſienſi* & *Grenovicenſi*, ac Aſtronomorum

morum Clariſſimorum curæ commiſſis, accidit ut hujus Cometæ Motus apparens, quantum forſan mortalibus fas eſt, accuratiſſime à *Caſſino* & *Flamſtedio* obſervaretur.

Non multo poſt, dum Geometrarum facile Princeps *D. Newtonus* operam dabat *Principiis Philoſophiæ Mathematicis*; non ſolum Inventa *Kepleri* in Syſtemate Planetario neceſſariò locum habere demonſtravit, verum etiam Cometarum Phænomena omnia ex iiſdem Principiis evidenter conſequi. Id quod exemplo prædicti Cometæ Anni 1680 abunde illuſtravit, modumque docuit Geometricè conſtruendi Orbitas Cometarum; Problemaque arduum ac tanto Oedipo dignum ſumma cum omnium admiratione ſolutum dedit. Cometam autem hunc in Orbe ad ſenſum Parabolico Solem circumiiſſe probat, ita ut Areæ ad Centrum Solis æſtimatæ Temporibus proportionales fuerint.

Tanti Viri veſtigia inſecutus eandem methodum Calculo Arithmetico accommodare aggreſſus ſum, nec irrito conamine. Undique enim conquiſitis Cometarum Obſervationibus, Tabellam hanc, immenſi pene Calculi fructum, obtinui; exiguum quidem ſed non ingratum Aſtronomis munus. Hi etenim Numeri vim habent omnia quæ de motu Cometarum hactenus obſervata ſunt ſat accuratè repræſentandi, ope ſolius Tabulæ Generalis inſequentis, cui adornandæ nullis ſane peperci laboribus, ut perfecta prodiret, utpote Poſteritati conſecrata ac cum Scientia Aſtronomica duratura.

Conſtat autem hæc Elementorum Tabula decem columellis, quarum *Prima* habet Annos quo viſi ſunt Cometæ. *Secunda* ac *Tertia* ſitus Planorum Orbium Cometicorum exhibent, nempe quibus Eclipticæ punctis Nodi Aſcendentes temporibus apparitionum hærebant, & quo Angulo ad Planum ejus inclinabantur Orbes. *Quarta* habet Loca Periheliorum, ſive Verticum Orbium Parabolicorum in Orbibus ipſis æſtimatæ. *Quinta* dat diſtantias minimas Cometarum à Sole in Periheliis ſuis, in ejuſmodi partibus quales media Solis à Terrâ diſtantia habet centies millenas. In *Sexta* habentur Logarithmi rationum iſtarum diſtantiarum ad mediam illam Solis diſtantiam. *Septima* continet Logarithmos mediorum motuum diurnorum, tempore quo peragit Cometa nonaginta gradus Orbis ſui à Perihelio in centenas partes dividi ſuppoſito. *Octava* exhibet tempora æquata Periheliorum in Meridiano *Londinenſi* & Stylo *Juliano*. *Nona* dat Angulos in planis Orbium inter Perihelia & Nodos Aſcendentes interceptos, quorum ope paulo patior fit calculus. *Decima* deniq; monſtrat qui mori fuerant Cometæ ſecundum Seriem Signorum, qui vero è contra Retrogradi fuerant.

# *MOTUUM COMETARUM IN ORBE PARABOLICO ELEMENTA ASTRONOMICA.*

| *Cometæ Anni.* | *Nodus Ascend.* | | | | *Inclin. Orbitæ.* | | | *Perihelion.* | | | *Distantia Perihelia à Sole.* | *Logarithmus Distantiæ Perihelicæ à Sole.* | *Logarithmus Medii Motus Diurni.* | *Temp. Æquat. Perihel.* | | | *Perihel. à Nodo.* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | | | | D. | H. | ′ | ° | ′ | ″ | |
| 1337 | ♊ | 24 | 21 | 0 | 32 | 11 | 0 | ♉ | 7 | 59 | 0 | 40666 | 9 609236 | 0 546274 | *Junii* 2 | 6 | 25 | 46 | 22 | 0 | Retrog. |
| 1472 | ♑ | 11 | 46 | 20 | 5 | 20 | 0 | ♉ | 15 | 33 | 30 | 54273 | 9 734584 | 0 358252 | *Feb.* 28 | 22 | 23 | 123 | 47 | 10 | Retrog |
| 1531 | ♉ | 19 | 25 | 0 | 17 | 56 | 0 | ♒ | 1 | 39 | 0 | 56700 | 9 753583 | 0 329754 | *Aug.* 24 | 21 | 18 | 107 | 46 | 0 | Retrog. |
| 1532 | ♊ | 20 | 27 | 0 | 32 | 36 | 0 | ♋ | 21 | 7 | 0 | 50910 | 9 706803 | 0 399924 | *Oct.* 19 | 22 | 12 | 30 | 40 | 0 | Direct. |
| 1556 | ♍ | 25 | 42 | 0 | 32 | 6 | 30 | ♑ | 8 | 50 | 0 | 46390 | 9 666424 | 0 460492 | *Apr.* 21 | 20 | 3 | 103 | 8 | 0 | Direct. |
| 1577 | ♈ | 25 | 52 | 0 | 74 | 32 | 45 | ♌ | 9 | 22 | 0 | 18342 | 9 263447 | 1 064958 | *Oct.* 26 | 18 | 45 | 103 | 30 | 0 | Retrog. |
| 1580 | ♈ | 18 | 57 | 20 | 64 | 40 | 0 | ♋ | 19 | 5 | 50 | 59628 | 9 775450 | 0 296953 | *Nov.* 28 | 15 | 0 | 90 | 8 | 30 | Direct. |
| 1585 | ♉ | 7 | 42 | 30 | 6 | 4 | 0 | ♈ | 8 | 51 | 0 | 109358 | 0 038850 | 9 901853 | *Sept.* 27 | 19 | 20 | 28 | 51 | 30 | Direct. |
| 1590 | ♍ | 15 | 30 | 40 | 29 | 40 | 40 | ♏ | 6 | 54 | 30 | 57661 | 9 760882 | 0 318805 | *Jan.* 29 | 3 | 45 | 51 | 23 | 50 | Retrog. |
| 1596 | ♒ | 12 | 12 | 30 | 55 | 12 | 0 | ♏ | 18 | 16 | 0 | 51293 | 9 710058 | 0 395041 | *Julii* 31 | 19 | 55 | 83 | 56 | 30 | Retrog. |
| 1607 | ♉ | 20 | 21 | 0 | 17 | 2 | 0 | ♒ | 2 | 16 | 0 | 58680 | 9 768490 | 0 307393 | *Oct.* 16 | 3 | 50 | 108 | 5 | 0 | Retrog. |
| 1618 | ♊ | 16 | 1 | 0 | 37 | 34 | 0 | ♈ | 2 | 14 | 0 | 37975 | 9 579498 | 0 590881 | *Oct.* 29 | 12 | 23 | 73 | 47 | 0 | Direct. |
| 1652 | ♊ | 28 | 10 | 0 | 79 | 28 | 0 | ♈ | 28 | 18 | 40 | 84750 | 9 928140 | 0 067918 | *Nov.* 2 | 15 | 40 | 59 | 51 | 20 | Direct. |
| 1661 | ♊ | 22 | 30 | 30 | 32 | 35 | 50 | ♋ | 25 | 58 | 40 | 44851 | 9 651772 | 0 482470 | *Jan.* 16 | 23 | 41 | 33 | 28 | 10 | Direct. |
| 1664 | ♊ | 21 | 14 | 0 | 21 | 18 | 30 | ♌ | 10 | 41 | 25 | 102575 $\frac{1}{2}$ | 0 011044 | 9 943562 | *Nov.* 24 | 11 | 52 | 49 | 27 | 25 | Retrog. |
| 1665 | ♏ | 18 | 2 | 0 | 76 | 5 | 0 | ♊ | 11 | 54 | 30 | 10649 | 9 027309 | 1 419164 | *Apr.* 14 | 5 | 15 | 156 | 7 | 30 | Retrog. |
| 1672 | ♑ | 27 | 30 | 30 | 83 | 22 | 10 | ♉ | 16 | 59 | 30 | 69739 | 9 843476 | 0 194914 | *Feb.* 20 | 8 | 37 | 109 | 29 | 0 | Direct. |
| 1677 | ♏ | 26 | 49 | 10 | 79 | 3 | 15 | ♌ | 17 | 37 | 5 | 28059 | 9 448072 | 0 788020 | *Apr.* 26 | 0 | 37 | 99 | 12 | 5 | Retrog. |
| 1680 | ♑ | 2 | 2 | 0 | 60 | 56 | 0 | ♐ | 22 | 39 | 30 | 00612 $\frac{1}{2}$ | 7 787106 | 3 279469 | *Dec.* 8 | 0 | 6 | 9 | 22 | 30 | Direct. |
| 1682 | ♉ | 21 | 16 | 30 | 17 | 56 | 0 | ♒ | 2 | 52 | 45 | 58328 | 9 765877 | 0 311313 | *Sept.* 4 | 7 | 39 | 108 | 23 | 45 | Retrog. |
| 1683 | ♍ | 23 | 23 | 0 | 83 | 11 | 0 | ♊ | 25 | 29 | 30 | 56020 | 9 748343 | 0 337614 | *Julii* 3 | 2 | 50 | 87 | 53 | 30 | Retrog. |
| 1684 | ♐ | 28 | 15 | 0 | 65 | 48 | 40 | ♏ | 28 | 52 | 0 | 96015 | 9 982339 | 9 986620 | *Maii* 29 | 10 | 16 | 29 | 23 | 0 | Direct. |
| 1686 | ♓ | 20 | 34 | 40 | 31 | 21 | 40 | ♊ | 17 | 0 | 30 | 32500 | 9 511883 | 0 692304 | *Sept.* 6 | 14 | 33 | 86 | 25 | 50 | Direct. |
| 1698 | ♐ | 27 | 44 | 15 | 11 | 46 | 0 | ♑ | 0 | 51 | 15 | 69129 | 9 839660 | 0 200638 | *Oct.* 8 | 16 | 57 | 3 | 7 | 0 | Retrog. |

# TABULA GENERALIS MOTUUM COMETARUM IN ORBE PARABOLICO.

| Med. Mot Com. | Angulus à Perihelio. | Differentia Angulorum. | Logarithmus pro distantiâ à Sole. | Differentia Logarithm. | Med. Mot. Com. | Angulus à Perihelio. | Differentia Angulorum. | Logarithmus pro distantiâ à Sole. | Differentia Logarithm. |
|---|---|---|---|---|---|---|---|---|---|
| | ° ′ ″ | ° ′ ″ | | | | ° ′ ″ | ° ′ ″ | | |
| 0 | 0 0 0 | | 0,000000 | | 30 | 41 45 47 | | 0,059009 | |
| | | 1 31 40 | | 77 | | | 1 9 19 | | 3391 |
| 1 | 1 31 40 | | 0,000077 | | 31 | 42 55 6 | | 0,062400 | |
| | | 1 31 35 | | 232 | | | 1 8 14 | | 3438 |
| 2 | 3 3 15 | | 0,000309 | | 32 | 44 3 20 | | 0,065838 | |
| | | 1 31 28 | | 385 | | | 1 7 9 | | 3481 |
| 3 | 4 34 43 | | 0,000694 | | 33 | 45 10 29 | | 0,069319 | |
| | | 1 31 17 | | 537 | | | 1 6 6 | | 3520 |
| 4 | 6 6 0 | | 0,001231 | | 34 | 46 16 35 | | 0,072839 | |
| | | 1 31 1 | | 690 | | | 1 5 1 | | 3557 |
| 5 | 7 37 1 | | 0,001921 | | 35 | 47 21 36 | | 0,076396 | |
| | | 1 30 42 | | 838 | | | 1 3 57 | | 3588 |
| 6 | 9 7 43 | | 0,002759 | | 36 | 48 25 33 | | 0,079984 | |
| | | 1 30 19 | | 986 | | | 1 2 54 | | 3616 |
| 7 | 10 38 2 | | 0,003745 | | 37 | 49 28 27 | | 0,083600 | |
| | | 1 29 52 | | 1131 | | | 1 1 52 | | 3644 |
| 8 | 12 7 54 | | 0,004876 | | 38 | 50 30 19 | | 0,087244 | |
| | | 1 29 23 | | 1275 | | | 1 0 49 | | 3666 |
| 9 | 13 37 17 | | 0,006151 | | 39 | 51 31 8 | | 0,090910 | |
| | | 1 28 50 | | 1413 | | | 0 59 48 | | 3686 |
| 10 | 15 6 7 | | 0,007564 | | 40 | 52 30 56 | | 0,094596 | |
| | | 1 28 13 | | 1551 | | | 0 58 48 | | 3704 |
| 11 | 16 34 20 | | 0,009115 | | 41 | 53 29 44 | | 0,098300 | |
| | | 1 27 34 | | 1683 | | | 0 57 48 | | 3719 |
| 12 | 18 1 54 | | 0,010798 | | 42 | 54 27 32 | | 0,102019 | |
| | | 1 26 53 | | 1811 | | | 0 56 49 | | 3733 |
| 13 | 19 28 47 | | 0,012609 | | 43 | 55 24 21 | | 0,105752 | |
| | | 1 26 7 | | 1941 | | | 0 55 51 | | 3738 |
| 14 | 20 54 54 | | 0,014550 | | 44 | 56 20 12 | | 0,109490 | |
| | | 1 25 20 | | 2057 | | | 0 54 54 | | 3750 |
| 15 | 22 20 14 | | 0,016607 | | 45 | 57 15 6 | | 0,113240 | |
| | | 1 24 30 | | 2176 | | | 0 53 57 | | 3755 |
| 16 | 23 44 44 | | 0,018783 | | 46 | 58 9 3 | | 0,116995 | |
| | | 1 23 38 | | 2289 | | | 0 53 1 | | 3761 |
| 17 | 25 8 22 | | 0,021072 | | 47 | 59 2 4 | | 0,120756 | |
| | | 1 22 46 | | 2398 | | | 0 52 7 | | 3762 |
| 18 | 26 31 8 | | 0,023470 | | 48 | 59 54 11 | | 0,124518 | |
| | | 1 21 47 | | 2499 | | | 0 51 14 | | 3760 |
| 19 | 27 52 55 | | 0,025969 | | 49 | 60 45 25 | | 0,128278 | |
| | | 1 20 52 | | 2601 | | | 0 50 20 | | 3757 |
| 20 | 29 13 47 | | 0,028570 | | 50 | 61 35 45 | | 0,132035 | |
| | | 1 19 53 | | 2693 | | | 0 49 29 | | 3757 |
| 21 | 30 33 40 | | 0,031263 | | 51 | 62 25 14 | | 0,135792 | |
| | | 1 18 52 | | 2782 | | | 0 48 38 | | 3752 |
| 22 | 31 52 32 | | 0,034045 | | 52 | 63 13 52 | | 0,139544 | |
| | | 1 17 51 | | 2871 | | | 0 47 48 | | 3747 |
| 23 | 33 10 23 | | 0,036916 | | 53 | 64 1 40 | | 0,143291 | |
| | | 1 16 49 | | 2948 | | | 0 46 58 | | 3738 |
| 24 | 34 27 12 | | 0,039864 | | 54 | 64 48 38 | | 0,147029 | |
| | | 1 15 47 | | 3028 | | | 0 46 12 | | 3733 |
| 25 | 35 42 59 | | 0,042892 | | 55 | 65 34 50 | | 0,150762 | |
| | | 1 14 42 | | 3097 | | | 0 45 23 | | 3720 |
| 26 | 36 57 41 | | 0,045989 | | 56 | 66 20 13 | | 0,154482 | |
| | | 1 13 39 | | 3165 | | | 0 44 37 | | 3710 |
| 27 | 38 11 20 | | 0,049154 | | 57 | 67 4 50 | | 0,158192 | |
| | | 1 12 34 | | 3228 | | | 0 43 52 | | 3698 |
| 28 | 39 23 54 | | 0,052382 | | 58 | 67 48 42 | | 0,161890 | |
| | | 1 11 29 | | 3286 | | | 0 43 8 | | 3688 |
| 29 | 40 35 23 | | 0,055668 | | 59 | 68 31 50 | | 0,165578 | |
| | | 1 10 24 | | 3341 | | | 0 42 26 | | 3676 |
| 30 | 41 45 47 | | 0,059009 | | 60 | 69 14 16 | | 0,169254 | |

# TABULA GENERALIS MOTUUM COMETARUM IN ORBE PARABOLICO.

| Med. Mot. Com. | Angulus à Perihelio. | Differentia Angulorum. | Logarithmus pro distantiâ à Sole. | Differentia Logarithm. |
|---|---|---|---|---|
| | ° ′ ″ | ° ′ ″ | | |
| 60 | 69 14 16 | | 0,169254 | |
| | | 0 41 42 | | 3660 |
| 61 | 69 55 58 | | 0,172914 | |
| | | 0 40 58 | | 3643 |
| 62 | 70 36 56 | | 0,176557 | |
| | | 0 40 20 | | 3631 |
| 63 | 71 17 16 | | 0,180188 | |
| | | 0 39 40 | | 3615 |
| 64 | 71 56 56 | | 0,183803 | |
| | | 0 39 1 | | 3601 |
| 65 | 72 35 57 | | 0,187404 | |
| | | 0 38 18 | | 3574 |
| 66 | 73 14 15 | | 0,190978 | |
| | | 0 37 41 | | 2562 |
| 67 | 73 51 59 | | 0,194540 | |
| | | 0 37 7 | | 3545 |
| 68 | 74 29 6 | | 0,198085 | |
| | | 0 36 32 | | 3529 |
| 69 | 75 5 38 | | 0,201614 | |
| | | 0 35 57 | | 3508 |
| 70 | 75 41 35 | | 0,205122 | |
| | | 0 35 21 | | 3490 |
| 71 | 76 16 56 | | 0,208612 | |
| | | 0 34 47 | | 3468 |
| 72 | 76 51 43 | | 0,212080 | |
| | | 0 34 14 | | 3449 |
| 73 | 77 25 57 | | 0,215529 | |
| | | 0 33 44 | | 3434 |
| 74 | 77 59 41 | | 0,218963 | |
| | | 0 33 13 | | 3415 |
| 75 | 78 32 54 | | 0,222378 | |
| | | 0 32 42 | | 3394 |
| 76 | 79 5 36 | | 0,225772 | |
| | | 0 32 9 | | 3371 |
| 77 | 79 37 45 | | 0,229143 | |
| | | 0 31 39 | | 3347 |
| 78 | 80 9 24 | | 0,232490 | |
| | | 0 31 10 | | 3329 |
| 79 | 80 40 34 | | 0,235819 | |
| | | 0 30 42 | | 3308 |
| 80 | 81 11 16 | | 0,239127 | |
| | | 0 30 15 | | 3289 |
| 81 | 81 41 31 | | 0,242416 | |
| | | 0 29 48 | | 3268 |
| 82 | 82 11 19 | | 0,245684 | |
| | | 0 29 21 | | 3249 |
| 83 | 82 40 40 | | 0,248933 | |
| | | 0 28 54 | | 3226 |
| 84 | 83 9 34 | | 0,252159 | |
| | | 0 28 30 | | 3207 |
| 85 | 83 38 4 | | 0,255366 | |
| | | 0 28 4 | | 3186 |
| 86 | 84 6 8 | | 0,258552 | |
| | | 0 27 41 | | 3168 |
| 87 | 84 33 49 | | 0,261720 | |
| | | 0 27 16 | | 3145 |
| 88 | 85 1 5 | | 0,264865 | |
| | | 0 26 53 | | 3124 |
| 89 | 85 27 58 | | 0,267989 | |
| | | 0 26 29 | | 3103 |
| 90 | 85 54 27 | | 0,271092 | |

| Med. Mot. Com | Angulus à Perihelio. | Differentia Angulorum. | Logarithmus pro distantiâ à Sole. | Differentia Logarithm. |
|---|---|---|---|---|
| | ° ′ ″ | ° ′ ″ | | |
| 90 | 85 54 27 | | 0,271092 | |
| | | 0 26 7 | | 3084 |
| 91 | 86 20 34 | | 0,274176 | |
| | | 0 25 46 | | 3063 |
| 92 | 86 46 20 | | 0,277239 | |
| | | 0 25 23 | | 3045 |
| 93 | 87 11 43 | | 0,280284 | |
| | | 0 25 2 | | 3022 |
| 94 | 87 36 45 | | 0,283306 | |
| | | 0 24 42 | | 3002 |
| 95 | 88 1 27 | | 0,286308 | |
| | | 0 24 21 | | 2983 |
| 96 | 88 25 48 | | 0,289291 | |
| | | 0 24 0 | | 2960 |
| 97 | 88 49 48 | | 0,292251 | |
| | | 0 23 42 | | 2944 |
| 98 | 89 13 30 | | 0,295195 | |
| | | 0 23 24 | | 2927 |
| 99 | 89 36 54 | | 0,298122 | |
| | | 0 23 6 | | 2908 |
| 100 | 90 0 0 | | 0,301030 | |
| | | 0 45 14 | | 5752 |
| 102 | 90 45 14 | | 0,306782 | |
| | | 0 44 4 | | 5678 |
| 104 | 91 29 18 | | 0,312460 | |
| | | 0 42 56 | | 5600 |
| 106 | 92 12 14 | | 0,318060 | |
| | | 0 41 50 | | 5527 |
| 108 | 92 54 4 | | 0,323587 | |
| | | 0 40 48 | | 5455 |
| 110 | 93 34 52 | | 0,329042 | |
| | | 0 39 48 | | 5382 |
| 112 | 94 14 40 | | 0,334424 | |
| | | 0 38 50 | | 5312 |
| 114 | 94 53 30 | | 0,339736 | |
| | | 0 37 52 | | 5243 |
| 116 | 95 31 22 | | 0,344979 | |
| | | 0 37 0 | | 5174 |
| 118 | 96 8 22 | | 0,350153 | |
| | | 0 36 8 | | 5109 |
| 120 | 96 44 30 | | 0,355262 | |
| | | 0 35 18 | | 5044 |
| 122 | 97 19 48 | | 0,360306 | |
| | | 0 34 29 | | 4978 |
| 124 | 97 54 17 | | 0,365284 | |
| | | 0 33 43 | | 4916 |
| 126 | 98 28 0 | | 0,370200 | |
| | | 0 32 57 | | 4852 |
| 128 | 99 0 57 | | 0,375052 | |
| | | 0 32 14 | | 4792 |
| 130 | 99 33 11 | | 0,379844 | |
| | | 0 31 32 | | 4732 |
| 132 | 100 4 43 | | 0,384576 | |
| | | 0 30 52 | | 4674 |
| 134 | 100 35 35 | | 0,389250 | |
| | | 0 30 13 | | 4618 |
| 136 | 101 5 48 | | 0,393868 | |
| | | 0 29 34 | | 4560 |
| 138 | 101 35 22 | | 0,398428 | |
| | | 0 28 57 | | 4502 |
| 140 | 102 4 19 | | 0,402930 | |

# TABULA GENERALIS MOTUUM COMETARUM IN ORBE PARABOLICO.

| Med. Mot. Com. | Angulus à Perihelio. | Differentia Angulorum. | Logarithmus pro distantiâ à Sole. | Differentia Logarithm. |
|---|---|---|---|---|
| | ° ′ ″ | ′ ″ | | |
| 140 | 102 4 19 | | 0,402930 | |
| | | 28 22 | | 4450 |
| 142 | 102 32 41 | | 0,407380 | |
| | | 27 50 | | 4404 |
| 144 | 103 0 31 | | 0,411784 | |
| | | 27 17 | | 4348 |
| 146 | 103 27 47 | | 0,416132 | |
| | | 26 44 | | 4298 |
| 148 | 103 54 31 | | 0,420430 | |
| | | 26 12 | | 4246 |
| 150 | 104 20 43 | | 0,424676 | |
| | | 25 39 | | 4190 |
| 152 | 104 46 22 | | 0,428866 | |
| | | 25 11 | | 4146 |
| 154 | 105 11 33 | | 0,433012 | |
| | | 24 43 | | 4098 |
| 156 | 105 36 16 | | 0,437110 | |
| | | 24 16 | | 4054 |
| 158 | 106 0 32 | | 0,441164 | |
| | | 23 51 | | 4014 |
| 160 | 106 24 23 | | 0,445178 | |
| | | 23 24 | | 3966 |
| 162 | 106 47 47 | | 0,449144 | |
| | | 22 57 | | 3916 |
| 164 | 107 10 44 | | 0,453060 | |
| | | 22 33 | | 3876 |
| 166 | 107 33 17 | | 0,456936 | |
| | | 22 10 | | 3836 |
| 168 | 107 55 27 | | 0,460772 | |
| | | 21 47 | | 3795 |
| 170 | 108 17 14 | | 0,464567 | |
| | | 21 24 | | 3751 |
| 172 | 108 38 38 | | 0,468318 | |
| | | 21 2 | | 3712 |
| 174 | 108 59 39 | | 0,472030 | |
| | | 20 41 | | 3675 |
| 176 | 109 20 20 | | 0,475705 | |
| | | 20 20 | | 3635 |
| 178 | 109 40 40 | | 0,479340 | |
| | | 20 0 | | 3597 |
| 180 | 110 0 40 | | 0,482937 | |
| | | 19 40 | | 3561 |
| 182 | 110 20 20 | | 0,486498 | |
| | | 19 21 | | 3524 |
| 184 | 110 39 41 | | 0,490022 | |
| | | 19 3 | | 3490 |
| 186 | 110 58 44 | | 0,493512 | |
| | | 18 44 | | 3453 |
| 188 | 111 17 28 | | 0,496965 | |
| | | 18 27 | | 3419 |
| 190 | 111 35 55 | | 0,500384 | |
| | | 18 10 | | 3385 |
| 192 | 111 54 5 | | 0,503769 | |
| | | 17 53 | | 3352 |
| 194 | 112 11 58 | | 0,507121 | |
| | | 17 36 | | 3320 |
| 196 | 112 29 34 | | 0,510441 | |
| | | 17 21 | | 3288 |
| 198 | 112 46 55 | | 0,513729 | |
| | | 17 5 | | 3255 |
| 200 | 113 4 0 | | 0,516984 | |

| Med. Mot. Com. | Angulus à Perihelio. | Differentia Angulorum. | Logarithmus pro distantiâ à Sole. | Differentia Logarithm. |
|---|---|---|---|---|
| | ° ′ ″ | ′ ″ | | |
| 200 | 113 4 0 | | 0,516984 | |
| | | 33 25 | | 6422 |
| 204 | 113 37 25 | | 0,523406 | |
| | | 32 27 | | 6299 |
| 208 | 114 9 52 | | 0,529705 | |
| | | 31 31 | | 6181 |
| 212 | 114 41 23 | | 0,535886 | |
| | | 30 39 | | 6072 |
| 216 | 115 12 2 | | 0,541958 | |
| | | 29 49 | | 5964 |
| 220 | 115 41 51 | | 0,547922 | |
| | | 29 1 | | 5860 |
| 224 | 116 10 52 | | 0,553782 | |
| | | 28 15 | | 5756 |
| 228 | 116 39 7 | | 0,559538 | |
| | | 27 31 | | 5661 |
| 232 | 117 6 38 | | 0,565199 | |
| | | 26 49 | | 5563 |
| 236 | 117 33 27 | | 0,570762 | |
| | | 26 8 | | 5471 |
| 240 | 117 59 35 | | 0,576233 | |
| | | 25 30 | | 5383 |
| 244 | 118 25 5 | | 0,581616 | |
| | | 24 52 | | 5296 |
| 248 | 118 49 57 | | 0,586912 | |
| | | 24 17 | | 5210 |
| 252 | 119 14 14 | | 0,592122 | |
| | | 23 42 | | 5130 |
| 256 | 119 37 56 | | 0,597252 | |
| | | 23 10 | | 5049 |
| 260 | 120 1 6 | | 0,602301 | |
| | | 22 38 | | 4973 |
| 264 | 120 23 44 | | 0,607274 | |
| | | 22 8 | | 4900 |
| 268 | 120 45 52 | | 0,612174 | |
| | | 21 38 | | 4824 |
| 272 | 121 7 30 | | 0,616998 | |
| | | 21 9 | | 4752 |
| 276 | 121 28 39 | | 0,621750 | |
| | | 20 43 | | 4688 |
| 280 | 121 49 22 | | 0,626438 | |
| | | 20 16 | | 4618 |
| 284 | 122 9 3 | | 0,631056 | |
| | | 19 50 | | 4552 |
| 288 | 122 29 28 | | 0,635608 | |
| | | 19 26 | | 4490 |
| 292 | 122 48 54 | | 0,640098 | |
| | | 19 3 | | 4427 |
| 296 | 123 7 57 | | 0,644525 | |
| | | 18 39 | | 4368 |
| 300 | 123 26 36 | | 0,648893 | |
| | | 45 4 | | 10666 |
| 310 | 124 11 40 | | 0,659559 | |
| | | 42 56 | | 10321 |
| 320 | 124 54 36 | | 0,669880 | |
| | | 40 58 | | 9996 |
| 330 | 125 35 34 | | 0,679876 | |
| | | 39 10 | | 9692 |
| 340 | 126 14 44 | | 0,689568 | |
| | | 37 28 | | 9402 |
| 350 | 126 52 12 | | 0,698970 | |

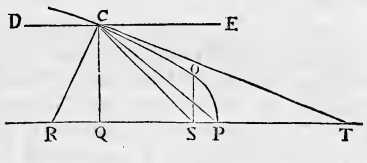
# TABULA GENERALIS MOTUUM COMETARUM IN ORBE PARABOLICO.

| Med. Mot. Com. | Anguli à Perihelio. | Differentia Angulorum. | Logarithmus pro distantiâ à Sole. | Differentia Logarithm. |
|---|---|---|---|---|
| | ° ′ ″ | ′ ″ | | |
| 350 | 126 52 12 | | 0,698970 | |
| | | 35 54 | | 9134 |
| 360 | 127 28 6 | | 0,708104 | 8872 |
| 370 | 128 2 33 | 34 27 | 0,716976 | 8630 |
| 380 | 128 35 38 | 33 5 | 0,725606 | 8400 |
| 390 | 129 7 27 | 31 49 | 0,734006 | 8180 |
| 400 | 129 38 4 | 30 37 | 0,742186 | |
| | | 29 30 | | 7974 |
| 410 | 130 7 34 | | 0,750160 | 7770 |
| 420 | 130 36 2 | 28 28 | 0,757930 | 7586 |
| 430 | 131 3 30 | 27 28 | 0,765516 | 7402 |
| 440 | 131 30 2 | 26 32 | 0,772918 | 7230 |
| 450 | 131 55 41 | 25 39 | 0,780148 | |
| | | 24 49 | | 7068 |
| 460 | 132 20 30 | | 0,787216 | 6910 |
| 470 | 132 44 32 | 24 2 | 0,794126 | 6756 |
| 480 | 133 7 50 | 23 18 | 0,800882 | 6612 |
| 490 | 133 30 25 | 22 35 | 0,807494 | 6475 |
| 500 | 133 52 20 | 21 55 | 0,813969 | |
| | | 41 58 | | 12553 |
| 520 | 134 34 18 | | 0,826522 | 12061 |
| 540 | 135 13 56 | 39 38 | 0,838583 | 11604 |
| 560 | 135 51 28 | 37 32 | 0,850187 | 11182 |
| 580 | 136 27 6 | 35 38 | 0,861369 | 10786 |
| 600 | 137 0 57 | 33 51 | 0,872155 | |
| | | 32 16 | | 10420 |
| 620 | 137 33 13 | | 0,882575 | 10074 |
| 640 | 138 3 58 | 30 45 | 0,892649 | 9752 |
| 660 | 138 33 21 | 29 23 | 0,902401 | 9449 |
| 680 | 139 1 29 | 28 8 | 0,911850 | 9162 |
| 700 | 139 28 25 | 26 56 | 0,921012 | |
| | | 25 51 | | 8895 |
| 720 | 139 54 16 | | 0,929907 | 8642 |
| 740 | 140 19 5 | 24 49 | 0,938549 | 8402 |
| 760 | 140 42 56 | 23 51 | 0,946951 | 8173 |
| 780 | 141 5 55 | 22 59 | 0,955124 | 7958 |
| 800 | 141 28 3 | 22 8 | 0,963082 | |

| Med. Mot. Com. | Anguli à Perihelio. | Differentia Angulorum. | Logarithmus pro distantiâ à Sole. | Differentia Logarithm. |
|---|---|---|---|---|
| | ° ′ ″ | ° ′ ″ | | |
| 800 | 141 28 3 | | 0,963082 | |
| | | 0 21 21 | | 7754 |
| 820 | 141 49 24 | | 0,970836 | 7561 |
| 840 | 142 10 0 | 0 20 36 | 0,978397 | 7374 |
| 860 | 142 29 56 | 0 19 56 | 0,985771 | 7199 |
| 880 | 142 49 10 | 0 19 14 | 0,992970 | 7030 |
| 900 | 143 7 48 | 0 18 38 | 1,000000 | |
| | | 0 18 3 | | 6871 |
| 920 | 143 25 51 | | 1,006871 | 6715 |
| 940 | 143 43 21 | 0 17 30 | 1,013586 | 6569 |
| 960 | 144 0 18 | 0 16 57 | 1,020155 | 6428 |
| 980 | 144 16 46 | 0 16 28 | 1,026583 | 6293 |
| 1000 | 144 32 46 | 0 16 0 | 1,032876 | |
| | | 4 53 22 | | 125312 |
| 1500 | 149 26 8 | | 1,158188 | 87870 |
| 2000 | 152 26 15 | 3 0 7 | 1,246058 | 67645 |
| 2500 | 154 32 20 | 2 6 5 | 1,313703 | 54975 |
| 3000 | 156 7 27 | 1 35 7 | 1,368678 | 46295 |
| 3500 | 157 22 49 | 1 15 22 | 1,414973 | |
| | | 1 1 45 | | 39951 |
| 4000 | 158 24 34 | | 1,454924 | 35201 |
| 4500 | 159 16 36 | 0 52 2 | 1,490125 | 31396 |
| 5000 | 160 1 12 | 0 44 36 | 1,521521 | 28353 |
| 5500 | 160 40 5 | 0 38 53 | 1,549874 | 25844 |
| 6000 | 161 14 24 | 0 34 19 | 1,575718 | |
| | | 0 30 36 | | 23742 |
| 6500 | 161 45 0 | | 1,599460 | 21957 |
| 7000 | 162 12 34 | 0 27 34 | 1,621417 | 20421 |
| 7500 | 162 37 34 | 0 25 0 | 1,641838 | 19084 |
| 8000 | 163 0 23 | 0 22 49 | 1,660922 | 17912 |
| 8500 | 163 21 20 | 0 20 57 | 1,678834 | |
| | | 0 19 22 | | 16874 |
| 9000 | 163 40 42 | | 1,695708 | 15954 |
| 9500 | 163 58 38 | 0 17 56 | 1,711662 | 15122 |
| 10000 | 164 15 20 | 0 16 42 | 1,726784 | 471176 |
| 50000 | 170 52 0 | 6 36 40 | 2,197960 | 201695 |
| 100000 | 172 45 44 | 1 53 44 | 2,399655 | |

# *Tabulæ Generalis Conſtructio & Uſus.*

UT Planetæ in Orbibus Ellipticis, ita Cometæ (ut dictum eſt) in Parabolicis Solem in Foco communi ſitum ambiunt, ea lege ut Areæ æquales æqualibus temporibus deſcribantur. Quoniam vero Parabolæ omnes ſunt Curvæ ſimiles, ſi eductis è Foco rectis, determinata aliqua pars Areæ Parabolæ cujuſvis dividatur utcunque, in omnibus Parabolis fiet ſimilis diviſio ſub iiſdem Angulis, ac diſtantiæ à Foco erunt reſpectivè proportionales: Proinde una noſtra Tabula pro Cometis omnibus ſufficiet. Calculi autem hujus Tabulæ hæc eſt ratio. In Schemate ſit S Sol, P O C orbita Cometæ, P Perihelion, O Locus ubi Cometa quadrante diſtat à Perihelio, C Locus quivis alius. Junge C P, C S, ac fiant S T, S R æquales ipſi C S, & ductis rectis C R, C T, (quarum altera tanget Curvam in C, altera vero eidem perpendicularis erit) in Axem P S R demitte normalem C Q. Jam datâ areâ quacunque C O P S = *a*, oporteat angulum C S P & diſtantiam C S inquirere.




Quoniam ob naturam Parabolæ recta R Q ubiq; æqualis eſt dimidio Lateris recti, ponatur Latus rectum = 2, adeoq; R Q = 1; ac ſit C Q = *z*, proinde P Q = $\frac{1}{2}zz$, ac Segmentum Parabolicum C O P = $\frac{1}{12}zzz$; Triangulum autem C S P erit = $\frac{1}{4}z$: Unde Area mixtilinea C O P S erit = $\frac{1}{12}z^3 + \frac{1}{4}z = a$, ac $z^3 + 3z = 12a$. Quare reſoluta hac æquatione Cubica, *z* ſive ordinatim applicata C Q innoteſcet. Proponatur jam Area O P S in partes centeſimas dividenda. Hæc Area duodecima pars eſt quadrati è Latere recto, adeoq; $12a$ æquantur quadrato illo = 4. Si itaque ſucceſſivè extrahantur radices æquationum $z^3 + 3z = 0{,}04 : 0{,}08 : 0{,}12 : 0{,}16$, &c. habebuntur totidem *z* ſive ordinatim applicatæ C Q reſpectivè, ac diviſa erit Area S O P in partes centum æquales. Eodemq; prorſus modo continuandus eſt calculus ultra Locum O. Cum autem R Q ſit = 1, radix hujus Æquationis ſit Tangens Tabularis anguli C R Q ſive dimidii anguli C S P, adeoq; angulus C S P datur. Ejuſdemq; anguli C R Q Secans R C media proportionalis eſt inter R Q = 2 P S & R T quæ dupla eſt ipſius S C, ut ex Conicis notiſſimum eſt. Eſt igitur S P ad S C in duplicatâ ratione Radii ad Secantem anguli dimidii à Perihelio Cometæ; vel ſi mavis, in ratione quam habet Sinus Verſus anguli C S R, ſive anguli ab Aphelio Cometæ, ad Diametrum

metrum Circuli. His jactis fundamentis præcedentem Tabulam elaboravi, repræſentandis omnium Cometarum motibus inſervientem: Nullus enim ex hactenus obſervatis motus Parabolici Leges quoad ſenſum recuſat.

Reſtat jam præcepta Calculi tradere, modumq; ſupputandi locum Cometæ viſum ex his Numeris exhibere. Cometæ autem in Parabolâ moventis Velocitas ubiq; eſt ad velocitatem Planetæ gyrantis in Circulo circa Solem, ad eandem a Sole diſtantiam, ut $\sqrt{2}$ ad 1; ut conſtat ex *Principiis Philoſ. Nat. Math. Lib.* I. *Prop.* 16. *Coroll.* 7. Si itaque Cometa in Perihelio ad diſtantiam æqualem diſtantiæ Terræ à Sole ſupponatur, foret Area diurna à Cometa deſcripta ad Aream quam deſcribit Terra ut $\sqrt{2}$ ad 1, ac proinde tempus Anni ſiderei, ſive $365^{D.}\ 6^{H.}\ 9'$, ad Tempus quo Cometa talis deſcriberet Quadrantem Orbitæ ſuæ à Perihelio, ſive Aream ſpatio POS analogam, ut Area Circuli ſive 3,14159, *&c.* ad Aream parabolicam $= \frac{4}{3} \times \sqrt{\frac{1}{2}} = \frac{2}{3}\sqrt{2}$. Cometa igitur deſcriberet quadrantem illum Diebus $109^{D.}\ 14^{H.}\ 46'$, atq; adeo Areâ illâ Parabolicâ ut POS in centum particulas diſtributâ, ſingulis Diebus competunt particulæ 0,912280, cujus Logarithmus nempe 9,960128 in perpetuum uſum ſervandus. Tempora autem quibus Cometæ in diſtantiis majoribus vel minoribus Quadrantes ſimiles deſcriberent, ſunt ut Revolutiones in Circulis, hoc eſt in ſeſquiplicata ratione Diſtantiarum; adeoq; Areæ diurnæ in partibus centeſimis Quadrantum æſtimatæ (quas quidem Centeſimas medii Motus menſuras, inſtar graduum Anomaliæ, ponimus) ſunt in ſingulis in ſubſeſquialtera ratione Diſtantiarum à Sole in Perihelio.

His neceſſario præmiſſis proponatur alicujus è Cometis noſtris Locum viſum ad datum Tempus ſupputare. Ac primum habeatur in promptu Locus Solis ab Æquinoctio, cum Logarithmo Diſtantiæ ejuſdem a Terra. 2°. Capiatur intervallum Temporis inter Tempus datum & Tempus Perihelii è columnâ octavâ Elementorum ſumptum, in Diebus & Diei partibus decimalibus. Hujus numeri Logarithmo addatur Logarithmus conſtans 9,960128 ac complementum Arithmeticum ſeſquialterius Logarithmi Diſtantiæ Perihelia à Sole Summa erit Logarithmus medii Motus Cometæ in prima Columna *Tabulæ Generalis* quærendi. Idem autem compendioſius habetur ope Logarithmi medii Motus Diurni in Columnâ ſeptimâ, Logarithmo Temporis ſimpliciter addendi. 3°. Cum Motu medio capiatur in Tabulâ correſpondens angulus à Perihelio, & Logarithmus pro Diſtantia à Sole: Ac in Cometis Directis adde, in Retrogradis ſubduc, ſi fuerit Tempus poſt Perihelion; vel in Directis ſubduc & in Retrogradis adde, ſi fuerit ante Perihelion, angulum ſic inventum a loco vel ad locum Perihelii in columnâ quartâ; & habebitur Locus Cometæ

tæ in Orbe proprio. Ac ad Logarithmum pro Diſtantia ibidem inventum addatur Logarithmus Diſtantiæ Periheliæ (Colum. VI.) ſumma erit Logarithmus Diſtantiæ veræ Cometæ à Sole. 4°. Cum loco Cometæ in Orbita, dato loco Nodi (Colum. II.) capiatur Diſtantia Cometæ à Nodo; ac datâ Inclinatione Plani (Colum. III.) dabuntur, notiſſimis *Trigonometriæ* præceptis, locus Cometæ ad Eclipticam reductus, cum Inclinatione ſive Latitudine Heliocentricâ, ac Diſtantiæ curtatæ Logarithmus. 5°. Ex his datis, iiſdem omnino Regulis quibus loca Planetarum, ex dato loco & Diſtantiâ Solis obtinebitur Cometæ locus viſus ſeu Geocentricus, cum Latitudine viſâ. Hoc autem Exemplo uno vel altero forſan operæ pretium erit illuſtrare.

Exempl. I. Quæritur Locus Cometæ Anni $166\frac{4}{5}$ *Martii* 1°. 7ʰ. 00′. P. M. Hoc eſt 96ᵈ. 19ʰ. 8′. poſt Perihelion ejus *Novemb.* 24°. 11ʰ. 52′. celebratum.

| | | | | | |
|---|---|---|---|---|---|
| *Log. diſt. Perihel.* | 0.011044 | *Perihel.* ☊ | 10. 41. 25 | *Log pro diſt.* | 0. 255369 |
| *Log. Seſquialt.* | 0.016566 | *Ang. Correſp.* | 83. 38. 05— | *Log. Perihel.* | 0. 011044 |
| *Comp. Arith.* | 9.983434 | *Com. in Orb.* ♉ | 17. 3. 20 | *Co-ſin. Incl.* | 9.990754 |
| | 9.960128 | ☊ ♊ | 21. 14. 00. | *Log. diſt. Curt.* | 0. 257167 |
| *Log. Temp.* | 1.985862 | *Com. à Nodo* | 34. 10. 40. | *Log. diſt.* ☉ | 9. 997939 |
| *Log. Med. Mot.* | 1.929424 | *Red. ad Eclip.* | 32. 19. 05. | ☉ ♐ | 21. 44. 33 |
| *Medius Motus* | 85, 001 | *Com. Helioc.* ♉ | 18. 54. 55. | *Com. Viſus* ♈ | 29. 18. 20 |
| | | *Inc'in. Bor.* | 11. 46. 50. | *Lat. Viſa* | 8. 36. 15. *Bor.* |

Exempl. II. Quæritur Locus Cometæ Anni 1683 *Julii* 23°. 13ʰ. 35′. P. M. *Londini.* Vel 13ʰ. 40′. Temp. æquat. Hoc eſt 21ᵈ. 10ʰ. 50′. poſt Perihelion.

| | | | | | |
|---|---|---|---|---|---|
| *Log. diſt. Perihel.* | 9. 748343 | *Perihel.* ♊ | 25. 29. 30 | *Log. pro diſt.* | 0. 111336 |
| *Log. Seſquialt.* | 9. 622514 | *Ang. Correſp.* | 56. 47. 20 | *Log. Perihel.* | 9. 748343 |
| *Comp. Arith.* | 0. 377486 | *Com. in Orb.* ♈ | 28. 42. 10 | *Co-ſin Inclin.* | 9. 913187 |
| | 9. 960128 | ♉ ♐ | 23. 23. 00 | *Log. diſt. Curt.* | 9. 772866 |
| *Log. Temp.* | 1. 310723 | *Com. à* ♉ | 35. 19. 10 | *Log. diſt.* ☉ | 0. 006062 |
| *Log. Med. Mot.* | 1. 648337 | *Red. ad Eclip.* | 4. 48. 30 | ☉ *Locus* ☊ | 10. 39. 14 |
| *Medius Motus* | 44, 498 | *Com. Helioc.* ♐ | 28. 11. 30 | *Com. Viſus* ♋′ | 5. 11. 28 |
| | | *Inclin. Bor.* | 35. 2. 00 | *Lat. Bor.* | 28. 52. 13 |

Horâ autem primi Exempli, ſeorſim obſervatum eſt ab *Auzoutio* & *P. Gottignio* Cometam applicari ad Stellam ſecundam *Arietis*; ita ut novem vel decem minutis illâ borealior repertus ſit, quoad longitudinem vero quaſi conjunctus. In ſecundo autem Exemplo ipſe, in vicinià *Londini*, Inſtrumentis quibus olim Stellas Auſtrales obſervaveram, Cometæ locum deprehendi ♋. 5°. 11′ $\frac{1}{2}$, cum Latitudine Boreali 28°. 51′; conſentiente ad amuſſim obſervatione *Grenovicenſi* eodem pene momento factâ.

Cometa autem Anni 1680, qui pene Solem attigit, (non enim triente ſemidiametri corporis Solaris à ſuperficie ejus diſtabat in Perihelio) cum Latus

rectum exiguum admodum ſit, Tabulâ Generali haud coerceri potuit, ob immanem Motus medii velocitatem: Præſtat itaque in hoc Cometa, poſtquam inventus fuerit Motus ejus medius, ex eodem, ope præcedentis æquationis $z^3 + 3z = \frac{4}{100}$ *Mot. med.* Tangentem dimidii anguli à Perihelio elicere, una cum Logarithmo pro diſtantia à Sole. Quibus datis iiſdem omnino regulis ac in cæteris procedendum eſt.

Ad hunc itaque modum Aſtronomico Lectori examinare licet numeros à me poſitos, quos ſummâ curâ ex obſervationibus quæ ſuppetebant exantlavi; neque enim, antequam probe ad incudem redacti fuerant, ac multo ſtudio quantum fieri poſſit politi, in publicum prodiere. Monendus autem eſt Lector, quinque priores ordine Cometas, quorum tertius & quartus eſt à *Petro Apiano* obſervatus, quintus vero à *Paulo Fabricio*, uti & decimus à *Michaele Mæſtlino* Anno 1596 conſpectus, non eundem certitudinis gradum cum reliquis præ ſe ferre: neque enim debitis organis nec curâ ad hoc requiſitâ obſervationes ipſæ peractæ ſunt; adeoque inter ſe diſſidentes nullo modo cum computo regulari conciliari poſſunt. Cometam Anni 1684 unus vidit Cl. *Blanchinus* Obſervator *Romanus*: ultimum vero Anni ſc. 1698 *Pariſienſes* ſoli conſpexerunt, ejuſque curſum inſolito modo deſignarunt. Obſcurus hic admodum, etiamſi velox ac Terris ſatis vicinus, noſtros ſane Oculos alioquin non incurioſos effugit. Inſignes autem duos hac noſtra ætate Cometas, alterum Anno 1689 Menſe *Novembri* ortum, alterum Menſe *Februario* Anni 1702, Catalogo ſubjungere non licuit, propter defectum Obſervationum. Etenim verſus Mundi plagas Auſtrales curſum dirigentes, ac in *Europâ* vix conſpicui, contemplatores non habuere negotio pares.

Collatis autem inter ſe horum Cometarum motuum Elementis, videre eſt nullo ordine diſpoſitos eſſe Orbitas; neque ipſos, Planetarum more, Zodiaco comprehendi poſſe, quaquaverſum tam Retrograde quam Directe indifferenter latos: unde manifeſtum eſt eos Motu Vorticali nullo modo circumagi. Quinetiam diſtantiæ Periheliæ nunc majores nunc minores reperiuntur; unde pronum eſt ſuſpicari etiam multo plures eſſe Cometas, qui in partibus à Sole remotioribus, obſcuri caudâque deſtituti, adeoque nobis inconſpicui, præterlabi poſſunt.

Hactenus Cometarum Orbes conſideravimus ut perfectè Parabolicos; quo ſuppoſito conſequeretur Cometas, Vi Centripeta verſus Solem impulſos, à ſpatiis infinite diſtantibus deſcendere, caſuque ſuo velocitatem tantam acquirere, ut iterum in ſpatia Mundi remotiſſima ſeſe abdere poſſint, perpetuo niſu ſurſum tendentes, nec ad Solem unquam reverſuri. Cum autem ſatis frequentes ſint Cometarum adventus; ac eorum nullus reperiatur motu ferri Hyperbolico,

bolico, seu velociore quam cadendo ad Solem acquirere debeat, credibile est potius in Orbibus valde Eccentricis eos revolvi circa Solem, ac post longissimas Periodos reverti. Sic enim Numerus eorum præfinitus esset, ac fortasse non usque adeo magnus. Spatia autem inter Solem Fixasque tanta sunt, ut Cometæ revolventi cum Periodo quantumvis longâ satis loci sit. Latus autem rectum Ellipsis est ad Latus rectum Parabolæ eandem Periheliam distantiam habentis, ut distantia Aphelia in Ellipsi est ad Axem totum Ellipseos; Velocitates autem sunt in dimidiata ratione Laterum rectorum: quapropter in Orbibus valde Eccentricis ratio hæc accedit proximè ad rationem æqualitatis. Tantilla autem differentia quæ intercedit, ratione majoris in Parabola velocitatis, facillime in situ Orbis determinando compensatur. Tabulæ itaq; Elementorum Motuum usus præcipuus est, atque etiam propter quem illam construere operæ pretium duxi, ut, siquando novus Cometa emerserit, possimus collatis Elementis dignoscere an poterit esse aliquis ex antiquis, necne; ac proinde Periodum Orbitæque Axem determinare, reditumque prædicere.

## *De Motu Cometarum in Orbibus Ellipticis.*

COnfectâ jam ante plures annos Elementorum Tabulâ præmissâ, statim subodoratus sum, ex situ consimili Planorum & Periheliorum, unum eundemq; fuisse Cometam tertia vice in Orbe Elliptico revolutum, qui annis 1531, 1607, & 1682 conspecti sunt. Verum cum Periodorum & Inclinationum diversitas aliquanto nimia huic nostræ suspicioni adversari videretur, ac priorum *Apiani* & *Kepleri* observata parum accurata, ne dicam rudia, tam subtili negotio enucleando vix paria esse judicarem; contentus eram, cum hanc Synopsin prima vice, anno sc. 1705, ederem, conceptus hos meos, aliqua saltem probabilitatis specie fultos, indicasse; Posteroque ut reditum ejus, juxta annum 1758 expectandum, sedulò præstolarentur monuisse. Postea vero quam, evolutis Cometarum antiquiorum Catalogis, Tres alios deprehenderam, eodem plane ordine, paribusq; temporis intervallis, dictos Tres præcessisse (nempe anno 1305 circa *Paschatn*, anno 1380 sed incerto Mense, ac deinde anno 1456 Mense *Junio*) priorem sententiam paulo audentius tueri cœpi: Et compos factus methodi quâ calculus in Orbe Elliptico quantumvis Eccentrico accuratè & perfacile absolvitur, loco Orbis Parabolici Cometæ anni 1682 inter Elementa descripti, Ellipsi Magnitudine & Specie datæ, in cujus Foco Sol, ad Eclipticæ planum Terræq; in eâ motum ita Positionem coaptare aggressus sum, ut omnia D^ni *Flamstedii* de

hoc

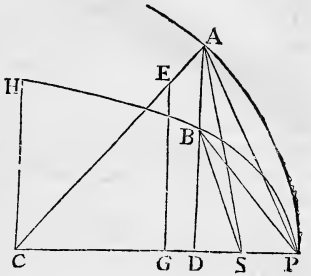
hoc Cometâ obſervata, prægrandi ac peraccurato Sextante capta, & à Refractionibus debitè purgata, Theoriam noſtram computi rigoroſi examini ſubjectam abunde comprobarent.

Manifeſtum autem eſt duas hujus Cometæ Periodos CLI annis proximè peragi, ſingulas vero alternatim majores & minores provenire LXXVI & LXXV annorum circiter: Proinde ſumptâ Periodo mediâ ſeptuaginta quinq; cum ſemiſſe annorum (per *Prop.* 15. Lib. I. *Princip. Philoſ. Natur.*) fit ſemiaxis major Orbis Cometæ ad mediam Terræ à Sole diſtantiam, ut $75\frac{2}{3}$, hoc eſt ut 17,8635 ad 1. Inventâ autem diſtantiâ Perihelia obſervationibus maxime congruâ partium iſtarum 0,5825, ſit Eccentricitas Orbis 17,2810, unde ſemiaxis minor 4,5246. Hujus Ellipſeos Planum ad Planum Ecliptiæ inclinatum reperi angulo 17°. 42′, Nodumque habere aſcendentem ad ♉ 20°. 48′; Perihelion vero Cometæ, in hoc Plano Retrogradi, ad ♒ 1°. 36′, ſive 109°. 12′ poſt Nodum Aſcend. Et Tempus æquatum Perihelii *Septemb.* 4°. $21^{h}$. 22′. Motus autem medius ejus diurnus pars erat $\frac{1}{75\frac{1}{4}}$ Motus medii diurni Solis, ſive 0°. 0′. 47″ quam proximè; & exiſtente radio 1, arcûs 0′. 47″ longitudo, hoc eſt 0,000227843, eſt ut Motus diurnus Cometæ in extremitate Axis minoris, & eam habet rationem ad circumferentiam Circuli, quam habet dies unus ad Tempus Periodicum, quamq; habet Area Elliptica, quotidie radiis ad Solem ductis intercepta, ad Aream totius Ellipſeos; quamque proinde commodè pro menſurâ Motûs medii Cometæ uſurpari poterit. Hujus itaq; Logarithmus 6,357636, Logarithmo Temporis à Perihelio additus, dat Logarithmum medii Motûs ad datum Tempus, ſive rationis Areæ, inter locum Cometæ in Orbe ſuo ac Perihelion radio ad Solem ducto abſciſſæ, ad Aream totam Ellipſeos.

Componitur autem hæc Area è duabus, nempe ex Areâ Trianguli cujus Baſis eſt diſtantia Perihelia Cometæ & altitudo ordinatim applicata, & ex Areâ Segmenti chordâ de vertice Ellipſis ad Cometam ductâ intercepti: Id quod fortaſſe nonnullis utile erit Schemate plenius exponi.

Orbis Cometæ Elliptici PBH ſit CP ſemiaxis major, CH ſemiaxis minor, PA circulus Ellipſi circumſcriptus, & S Focus; unde PS diſtantia Perihelia & CS Eccentricitas Orbis. Sit Cometæ locus in B, à quo ducatur ordinatim applicata ad Axem BD, quæ producta occurrat circulo in A, ac jungantur rectæ AP, AS; BP, BS; & in ductâ CA fiat CE ipſi CS æqualis, & ſit ad axem normalis EG. Jam conſtat ex probatiſſimis *Keplerі* inventis

inventis, aream P S A P esse ad aream totam Circuli, pariterq; P S B P ad aream totam Ellipseos, ut Tempus quo describeret Cometa arcum B P ad Tempus Periodicum quo revolutionem integram in Ellipsi perageret. Area autem P S A P conflatur è Segmento Circulari A P A & Triangulo P S A, cujus quidem Trianguli duplum est P S × A D Sinum anguli A C P; Segmenti vero duplum est excessus arcûs A P supra Sinum A D in radium C P ductus. Ponatur Radius C P = 1, & dicatur P S = *b*, & datâ areâ qualibet P A S P = *a*, quæratur A D = *z* Sinus Anomaliæ Eccentri A C P. Est autem $zb$ duplum Trianguli P S A; ac juxta Theorema notissimum, arcus Circularis A P = $z + \frac{1}{6}z^3 + \frac{3}{40}z^5 + \frac{5}{112}z^7$, *&c.* Unde dupla area Segmenti P A P fit $\frac{1}{3}z^3 + \frac{1}{10}z^5 + \frac{1}{168}z^7$, *&c.* Ac proinde $2a = bz + \frac{1}{6}z^3 + \frac{3}{40}z^5 + \frac{5}{112}z^7$, *&c.* Extractâ autem hujus æquationis Radice *z*, datur Anomalia Eccentri A C P, ejusq; Sinus Versus P D: ac si fiat ut C P ad C S ita P D ad S G, P G = S G + P S erit ipsi B S distantiæ Cometæ à Sole æqualis. Denique fiat ut C P ad C H ita A D ad B D, qui sinus erit Anomaliæ veræ sive anguli P S B ad radium B S.




Extractio autem Radicis ex hac æquatione minimè obvia est, nec generaliter in omni casu nisi tentando efficienda. Quocirca ad levandam Calculi molestiam, Tabulam sequentem, ejusdem pene formæ cum Tabula Generali pro Motu Parabolico, juxta jam expositа principia concinnavi; cujus ope Cometæ anni 1682 Observata omnia *Grenovicensia* satis apte repræsentantur.

Verum in hac Tabulâ condendâ usus sum artificio quale *Keplerus* in Tabulis suis *Rudolphinis* adhibet. Ponendo enim angulum Anomaliæ Eccentri A C P æquabiliter augeri, in secundâ Columnâ sub titulo medii Motus habetur dupla Area Spatii mixtilinei P A S P, composita ex differentiâ arcûs A P & Sinûs A D in Radium C P = 1, & ex rectangulo P S × A D simul sumptis, capiendo scilicet P S ad 1 in ratione quam habet semiaxis major 17,8635 ad 0,5825 distantiam Perihelium; unde P S fit 0,0326085, ejusq; Logarithmus 8,5133331. Columna Quarta exhibet angulum P S B Anomaliæ veræ à Perihelio; & Sexta Logarithmum rationis quam habet S P ad distantiam S B respectivè. Cæteræ Columnæ differentias dant priorum, unde paratius sumantur partes proportionales. Hæc autem Tabula non nisi in Ellipsibus huic nostræ similibus locum habet.

# TABULA MOTUS COMETÆ
## ANNIS MDXXXI, MDCVII & MDCLXXXII VISI.

| Anom. Eccentri. | Medius Motus Cometæ. | Differentia Medii Motus. | Angulus à Perihelio. | Differentia Angulorum. | Logarithmus pro distantiâ à Sole. | Differentia Logarithm. |
|---|---|---|---|---|---|---|
| ° ′ | | | ° ′ ″ | ° ′ ″ | | |
| 0 0 | 0,00000000 | | 0 0 0 | | 0,000000 | |
| | | 11383 | | 1 33 12 | | 78 |
| 0 12 | 0,00011383 | | 1 33 12 | | 0,000078 | |
| | | 11387 | 3 6 23 | 1 33 11 | | 236 |
| 24 | 0,00022770 | 11396 | | 1 33 6 | 0,000314 | 392 |
| 36 | 0,00034166 | | 4 39 29 | 1 33 1 | 0,000706 | 548 |
| 48 | 0,00045574 | 11408 | 6 12 30 | 1 32 51 | 0,001254 | 704 |
| 1 0 | 0,00056998 | 11424 | 7 45 21 | | 0,001958 | |
| | | 11445 | | 1 32 42 | | 859 |
| 12 | 0,00068443 | | 9 18 3 | | 0,002817 | |
| | | 11470 | 10 50 34 | 1 32 31 | | 1013 |
| 24 | 0,00079913 | 11498 | | 1 32 16 | 0,003830 | 1164 |
| 36 | 0,00091411 | | 12 22 50 | 1 32 0 | 0,004994 | 1317 |
| 48 | 0,00102943 | 11532 | 13 54 50 | 1 31 43 | 0,006311 | 1467 |
| 2 6 | 0,00114511 | 11568 | 15 26 33 | | 0,007778 | |
| | | 11609 | | 1 31 22 | | 1618 |
| 12 | 0,00126120 | | 16 57 55 | | 0,009396 | |
| | | 11655 | 18 28 59 | 1 31 4 | | 1760 |
| 24 | 0,00137775 | 11704 | | 1 30 40 | 0,011156 | 1908 |
| 36 | 0,00149479 | | 19 59 39 | 1 30 14 | 0,013064 | 2051 |
| 48 | 0,00161237 | 11758 | 21 29 53 | 1 29 47 | 0,015115 | 2192 |
| 3 0 | 0,00173052 | 11815 | 22 59 40 | | 0,017307 | |
| | | 11877 | | 1 29 20 | | 2332 |
| 12 | 0,00184929 | | 24 29 0 | | 0,019639 | |
| | | 11942 | 25 57 50 | 1 28 50 | | 2466 |
| 24 | 0,00196871 | 12014 | | 1 28 19 | 0,022105 | 2603 |
| 36 | 0,00208885 | | 27 26 9 | 1 27 46 | 0,023708 | 2733 |
| 48 | 0,00220972 | 12087 | 28 53 55 | 1 27 14 | 0,027441 | 2862 |
| 4 0 | 0,00233135 | 12163 | 30 21 9 | | 0,030303 | |
| | | 12248 | | 1 26 37 | | 2989 |
| 12 | 0,00245383 | | 31 47 46 | | 0,033292 | |
| | | 12332 | 33 13 49 | 1 26 3 | | 3111 |
| 24 | 0,00257715 | 12424 | | 1 25 24 | 0,036403 | 3233 |
| 36 | 0,00270139 | | 34 39 13 | 1 24 45 | 0,039636 | 3351 |
| 48 | 0,00282658 | 12519 | 36 3 58 | 1 24 6 | 0,042987 | 3465 |
| 5 0 | 0,00295274 | 12616 | 37 28 4 | | 0,046452 | |
| | | 12720 | | 1 23 25 | | 3577 |
| 12 | 0,00307994 | | 38 51 29 | | 0,050029 | |
| | | 12826 | 40 14 13 | 1 22 44 | | 3686 |
| 24 | 0,00320820 | 12938 | | 1 22 1 | 0,053715 | 3793 |
| 36 | 0,00333758 | | 41 36 14 | 1 21 16 | 0,057508 | 3897 |
| 48 | 0,00346809 | 13051 | 42 57 30 | | 0,061405 | |
| 6 0 | 0,00359981 | 13172 | 44 18 3 | 1 20 33 | 0,065400 | 3995 |

# TABULA MOTUS COMETÆ

## ANNIS MDXXXI, MDCVII & MDCLXXXII VISI.

| Anom. Eccentri. | Medius Motus Cometæ. | Differentia medii Motus. | Angulus à Perihelio. | Differentia Angulorum. | Logarithmus pro distantiâ à Sole. | Differentia Logarithm. |
|---|---|---|---|---|---|---|
| ° ′ | | | ° ′ ″ | ° ′ ″ | | |
| 6 0 | 0,00359981 | | 44 18 3 | | 0,065400 | |
| | | 13295 | | 1 19 48 | | 4093 |
| 12 | 0,00373276 | | 45 37 51 | | 0,069493 | |
| | | 13422 | | 1 19 3 | | 4183 |
| 24 | 0,00386698 | | 46 56 54 | 1 18 16 | 0,073676 | |
| | | 13553 | | | | 4276 |
| 36 | 0,00400251 | | 48 15 10 | 1 17 31 | 0,077952 | |
| | | 13689 | | | | 4363 |
| 48 | 0,00413940 | | 49 32 41 | 1 16 43 | 0,082315 | |
| | | 13829 | | | | 4447 |
| 7 0 | 0,00427769 | | 50 49 24 | | 0,086762 | |
| | | 13972 | | 1 15 56 | | 4530 |
| 12 | 0,00441741 | | 52 5 20 | | 0,091292 | |
| | | 14120 | | 1 15 8 | | 4606 |
| 24 | 0,00455861 | | 53 20 28 | 1 14 20 | 0,095898 | |
| | | 14271 | | | | 4682 |
| 36 | 0,00470132 | | 54 34 48 | 1 13 32 | 0,100580 | |
| | | 14427 | | | | 4753 |
| 48 | 0,00484560 | | 55 48 20 | 1 12 43 | 0,105333 | |
| | | 14587 | | | | 4824 |
| 8 0 | 0,00499147 | | 57 1 3 | | 0,110157 | |
| | | 14751 | | 1 11 55 | | 4889 |
| 12 | 0,00513898 | | 58 12 58 | | 0,115046 | |
| | | 14921 | | 1 11 7 | | 4953 |
| 24 | 0,00528819 | | 59 24 5 | 1 10 19 | 0,119999 | |
| | | 15093 | | | | 5014 |
| 36 | 0,00543912 | | 60 34 24 | 1 9 29 | 0,125013 | |
| | | 15267 | | | | 5070 |
| 48 | 0,00559179 | | 61 43 53 | 1 8 41 | 0,130083 | |
| | | 15447 | | | | 5128 |
| 9 0 | 0,00574626 | | 62 52 34 | | 0,135211 | |
| | | 15633 | | 1 7 53 | | 5178 |
| 12 | 0,00590259 | | 64 0 27 | | 0,140389 | |
| | | 15821 | | 1 7 3 | | 5229 |
| 24 | 0,00606080 | | 65 7 30 | 1 6 16 | 0,145618 | |
| | | 16015 | | | | 5276 |
| 36 | 0,00622095 | | 66 13 46 | 1 5 27 | 0,150894 | |
| | | 16210 | | | | 5322 |
| 48 | 0,00638305 | | 67 19 13 | 1 4 38 | 0,156216 | |
| | | 16410 | | | | 5363 |
| 10 0 | 0,00654715 | | 68 23 51 | | 0,161579 | |
| | | 16616 | | 1 3 51 | | 5403 |
| 12 | 0,00671331 | | 69 27 42 | | 0,166982 | |
| | | 16825 | | 1 3 3 | | 5440 |
| 24 | 0,00688156 | | 70 30 45 | 1 2 17 | 0,172422 | |
| | | 17037 | | | | 5476 |
| 36 | 0,00705193 | | 71 33 2 | 1 1 30 | 0,177898 | |
| | | 17254 | | | | 5509 |
| 48 | 0,00722447 | | 72 34 32 | 1 0 43 | 0,183407 | |
| | | 17474 | | | | 5539 |
| 11 0 | 0,00739921 | | 73 35 15 | | 0,188946 | |
| | | 17700 | | 0 59 56 | | 5568 |
| 12 | 0,00757621 | | 74 35 11 | | 0,194514 | |
| | | 17929 | | 0 59 11 | | 5595 |
| 24 | 0,00775550 | | 75 34 22 | 0 58 24 | 0,200109 | |
| | | 18162 | | | | 5619 |
| 36 | 0,00793712 | | 76 32 46 | 0 57 41 | 0,205728 | |
| | | 18399 | | | | 5643 |
| 48 | 0,00812111 | | 77 30 27 | 0 56 55 | 0,211371 | |
| | | 18640 | | | | 5663 |
| 12 0 | 0,00830751 | | 78 27 22 | | 0,217034 | |

Hujus etiam Calculi cape Exemplum. Anno 1682 *Auguſti* 30^mo 7^h. 42′ Temp. æquat. *Grenovici*, obſervatus eſt, repetitis & limitatis Obſervationibus, Locus Cometæ, deductâ refractione, in ♎ 15°. 34′. 42″, cum Lat. Boreâ 17°. 24′. 56″. Videamus jam quali ſucceſſu reſpondeat computus noſter.

Tempus propoſitum Perihelion Cometæ præceſſit 5^d. 13^h. 40′, ſive in partibus decimalibus, 5^d, 5694. Hujus numeri Logarithmus 0,745811 Logarithmo Motus diurni 6,3557636 additus, dat Log. numeri 0,00126896 pro medio Motu Cometæ ante Perihelion. In Tabulâ invenio, ad 2°. 12′ Anomaliæ Eccentri, Medium Motum 0,00126120 minorem dato partibus 776, quarum 11655 augent angulum à Perihelio 1°. 31′. 4″, & Logarithmum pro diſtantiâ à Sole differentiâ 1760: Adjectâ itaq; angulo 16°. 57′. 55″, & Logarithmo 0,009396, in Tabulâ iſti medio motui competentibus, parte proportionali reſpectivè, fit angulus veri Motus à Perihelio 17°. 3′. 58″, & Log. pro diſtantiâ à Sole 0,009513, ipſius vero diſtantiæ Log. 9,774809. Ad locum Perihelii nempe ♒ 1°. 36′ adde 17°. 3′. 58″, & habebitur locus Cometæ in Orbe ♒ 18°. 39′. 58″, ad Eclipticam vero reductus ♒ 18°. 33′. 36″, cum Latitudine Heliocentricâ 17°. 41′. 14″ Boreâ; unde Diſtantiæ curtatæ Log. 9,753779. Eodem momento Sol habuit ♍ 17°. 20′. 54″, ac Log. diſtantiæ ejus à Terrâ 0,002395. Ex his datis elicitur Locus Cometæ Geocentricus ♎ 15°. 35′. 58″ cum Lat. Boreâ 17°. 24′. 11″; peccans in Longitudine 1′. 16″, in Latitudine vero non niſi 0′. 45″.

Ad hunc modum Theoriam jam expoſitam cum omnibus D^ni *Flamſtedii* obſervatis conferendo, ubiq; intra differentias merito contemnendas conſenſum Cœli cum motu hoc Elliptico expertus ſum; uti patet ex ſubjectâ Tabellâ.

| M DC LXXXII. *Temp. Appar.* | | | *Cometæ Long. Obſervat.* | | | *Lat. Bor. Obſervat.* | | | *Cometæ Long. Comput.* | | | *Lat. Bor. Comput.* | | | *Differen. Longit.* | | | *Differen. Latit.* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D. | H. | ′ | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | | ′ | ″ | | ′ | ″ |
| *Aug.* 19 | 16 | 38 | ♌ 18 | 15 | 5 | 25 | 49 | 19 | ♌ 18 | 14 | 19 | 25 | 48 | 33 | — | 0 | 46 | — | 0 | 46 |
| 20 | 15 | 38 | | 24 | 47 | 55 | 26 | 11 | 50 | | 24 | 48 | 5 | 26 | 11 | 40 | + | 0 | 10 | — | 0 | 10 |
| 21 | 8 | 21 | | 29 | 37 | 51 | 26 | 15 | 15 | | 29 | 39 | 3 | 26 | 18 | 3 | + | 1 | 12 | + | 2 | 48 |
| 21 | 16 | 19 | ♍ | 1 | 58 | 0 | | | | ♍ | 1 | 58 | 23 | | | | + | 0 | 23 | | | |
| 22 | 8 | 8 | | 6 | 30 | 8 | 26 | 4 | 35 | | 6 | 32 | 10 | 26 | 6 | 37 | + | 2 | 2 | + | 2 | 2 |
| 29 | 8 | 20 | ♎ | 12 | 35 | 55 | 18 | 37 | 27 | ♎ | 12 | 38 | 19 | 18 | 35 | 3 | + | 2 | 24 | — | 2 | 24 |
| 30 | 7 | 45 | | 15 | 34 | 42 | 17 | 24 | 56 | | 15 | 35 | 58 | 17 | 24 | 11 | + | 1 | 16 | — | 0 | 45 |
| *Aug.* 31 | 8 | 21 | | 18 | 16 | 20 | | | | | 18 | 17 | 30 | | | | + | 1 | 10 | | | |
| *Sept.* 1 | 7 | 33 | | 20 | 28 | 12 | 15 | 11 | 37 | | 20 | 29 | 31 | 15 | 11 | 23 | + | 1 | 19 | — | 0 | 14 |
| 4 | 7 | 22 | | 25 | 39 | 36 | 12 | 22 | 29 | | 25 | 39 | 34 | 12 | 22 | 42 | — | 0 | 2 | + | 0 | 13 |
| 5 | 7 | 32 | | 26 | 58 | 20 | 11 | 31 | 26 | | 26 | 57 | 45 | 11 | 33 | 34 | — | 0 | 35 | + | 2 | 8 |
| 8 | 7 | 16 | ♎ | 29 | 56 | 0 | 9 | 25 | 31 | ♎ | 29 | 54 | 40 | 9 | 26 | 26 | — | 1 | 20 | + | 0 | 55 |
| 9 | 7 | 26 | ♏ | 0 | 41 | 36 | 8 | 49 | 2 | ♏ | 0 | 39 | 39 | 8 | 49 | 0 | — | 1 | 57 | — | 0 | 2 |

Neque

Neque ulteriore limâ Orbem hujus Cometæ expoliendum esse censui, cum differentiæ quas videmus non totæ Numerorum nostrorum erroribus tribuendæ sint; sed partim ipsis Observationibus, partim assumptis Fixarum locis nondum absolutè perfectis, præcipue vero Refractionibus aëreis prope Horizontem variis, quibus toto apparitionis suæ tempore implicabatur Cometa, vix unquam visus 12 gradibus altior. Sed & differentiæ istæ haudquaquam majores sunt quam quæ in Theoriis Planetarum primariorum, per tot secula ab Astronomis excultis, vulgo experimur. Utinam *Jovis* & *Saturni* Motus intra tam arctos limites coercere liceret.

Stabilito itaq; hoc Orbe, expendamus jam cursum Cometæ quem Anno 1607 se observasse scribunt *Keplerus* & *Longomontanus*, Viri sane in Astronomicis gravissimi, sed qui descriptione nimis laxâ, ac nostræ disquisitioni haud satis aptâ, contenti sunt: Qualia autem reliquere Observata hic habes.

Anno 1607, *Sept.* 16. St. Vet. *Keplerus Pragæ* circa horam nonam, vel *Londini* octavam, Cometam primâ vice vidit sub *Ursa majore*, & quantum ex situ inter Fixas remotiores potuit, locum ejus æstimavit ☊ 18°. 30′, cum Lat. Bor. $35\frac{1}{2}$. Sequenti mane hora tertiâ, distantia à *Genu Ursæ posteriori* (ψ *Bayero*) paulo minor erat distantiâ duarum in *Pede viciniore* (λ & μ *Ursæ*) eique ad oculum parallela, quasi in lineâ ex *Genu Ursæ* in *Solitariam Colli* (υ *Bayero*). Rectificatis Stellarum locis (quæ vitiosè describuntur, nescio quo casu, in Abaco *Tychonico*) fit visus Cometæ locus ☊ 21°. 49′. Lat. 36°. 12′ Boreâ. Horâ nempe *Londini* æquat. $13^h$. 51′.

*Sept.* 18. $8^h$. 30′ *Pragæ*, *Londini* $7^h$. 20′ Temp. æquat. Visus est Cometa stare infra Stellulam informem sociam *Informis magnæ inter Caudas Ursæ & Leonis*, quæ tunc habuit ♍ 12°. $18\frac{1}{4}$ cum Lat. 40°. $33\frac{1}{4}$, à quâ aberat diametro Lunæ, in lineâ quæ tendit secundum *Ultimam Caudæ Ursæ* per *Manum Bootis*. Cometam reponunt hæc Observata in ♍ 12°. 2′, cum Latitudine 40 graduum; cum nempe distantiæ nudo oculo æstimatæ Lunæ diametro æquales, sint saltem 40 Min.

*Sept.* 21. $7^h$. 30′ *Haphniæ*, hoc est *Londini* $6^h$. 30′ Temp. æquat. *Longomontanus*, per Sextantem quinque, ut ait, in radio Cubitorum, invenit Cometam distare à *Mediâ Caudæ Ursæ Majoris* 30°. 59′, & circa idem tempus à *Lucidâ Coronæ* 16°. 45′, Observationibus reiteratis. Hinc verificatis è *Catalogo Britannico* Fixarum locis, oritur Cometæ Long. ♎ 16°. 48′, cum Lat. Boreâ 37°. 12′. Circa idem tempus observavit *Keplerus*, Tyrone usus socio, Cometam distare ab *Arcturo* 6°. 5′, in recta ducente ab *Arcturo* in *præcedentem Humerum Bootis* (γ *Bayero*) unde Cometæ locus saltem ♎ 17°. 0′.

*Sept.* 25. Poſt horam primam ab Occaſu Solis *Pragæ* $6^h$. 48′ *Londini* Temp. æquat. $5^h$. 36′. videbatur Cometa exiguo ſuperior linea ex *Arcturo* in *Claram in Collo Serpentis* (α) diſtans ab eadem 4°. 30′. Horâ vero ſecundâ ab Occaſu Solis, ſive $7^h$. 37′ *Pragæ*, ſatis apparebat ſuperaſſe lineam ex *Radice Colli Serpentis* (δ) in *Eductionem Colli ejus* (β) ductam. Prima Obſervatio reponit Cometam in ♏ 12°. 0′; altera ad horam ſecundam in ♏ 12°. 30′ circiter.

*Sept.* 27. Cometa incidit in lineam ex *Secunda in Collo Serpentis* (δ) per *Claram Colli* ductam, ſtans ſub ea *quæ ſequitur Claram* (ε) Diametro Lunæ, vel paulo plus; & linea ex Cometâ per illam ſuam vicinam incidebat medio inter *Lucidam Coronæ* & *Humerum Herculis* (β). Hæc ſignant locum Cometæ in ♏ 18°. 50′, cum Lat. 23°. 20′ Bor. *Keplerus* horam non habet, ſed adultâ nocte factam Obſervationem credibile eſt, ob viſas Stellas minores. Pone $6^h$. 30′ *Londini* Temp. æquat.

*Octob.* 1. $6^h \frac{1}{2}$ *Malmogiæ* in *Scania* vidit *Longomontanus* Cometam diſtantem à *Boreâ Manus Serpentarii* quoad viſum vix gradûs dimidio; erat autem tunc in recta cum *Arcturo* & *Auſtrali in eadem Manu*: Circa idem tempus, ait *Keplerus*, exiguo erat inferior lineâ *duarum Manûs*, diſtans à proximâ tertiâ parte diſtantiæ illarum. Uterq; Obſervator, neſcio quo fato, perperam deduxere locum Cometæ ex his ſuis Obſervationibus, quem alter habet ♏ 25°. 50′, cum Lat. 17°. 35′; alter ♏ 26°. 30′, cum Lat. 17°. 40′, immani diſcrepantiâ, cum in æſtimatâ diſtantiâ & ſitu Cometæ pene conveniant. Si loco diametri Lunæ ponantur 40′, (ut nudo oculo plerumq; videtur) ac ſupponatur Cometa in linea recta cum Stellis *Manûs* conſtitutus, foret 23 Min. Borealior proximâ, ac 34 Min. Occidentalior, hoc eſt in ♏ 26°. 16′, cum Lat. Bor. 17°. 40′. Sed hanc rectam præcedebat ſenſibiliter conſenſu utriuſque, adeoq; erat proximè in ♏ 26°. 0′; id quod ſatis accurate reponit Cometam in lineâ rectâ cum *Arcturo* & *Auſtrali in Manû*, ut à *Longomontano* notatum eſt.

*Octob.* 2. Uterq; Obſervator iiſdem in Urbibus Cometam contulerunt cum prædictis Stellis in *Manû*. *Longomontanus* Horâ $6^h \frac{1}{2}$ vidit eum in cuſpide obtuſi Iſoſcelis Trianguli cum dictis Stellis, propius tamen ad earum Boream inclinabat. Conficiebat autem, quoad filarem extenſionem, rectam lineam cum *Penultima ad ortum in Coronâ* (ε) & *Boreâ in Manu*; itemque aliam rectam cum *Auſtrali Manûs* & *inferiore capite* ♏ (credo ♍). *Keplerus* circa idem tempus (horam enim non notat) vidit Cometam inter *duas Manûs* medium, infra tamen lineam illarum, paulo altior linea ex ima illarum in *Spi-*

*rans*

*ram Serpentis* vicinam ( $\mu$ *Serpentis Bayero*) Omnibus perpensis fit Locus Cometæ ♏ 27°. 5′, cum Lat. Boreâ 16°. 40′. *Londini* 5ʰ. 12′ Temp. æquat.

*Octob.* 5. 8ʰ. 30′ *Pragæ*, instrumentulo quodam è *Tychonicis*, observavit *Keplerus* distantiam Cometæ à *Genu Ophiuchi* ($n$) 14°. 14′, & ab *Humero præcedente Herculis* ($\beta$) 28°. 56′. Hinc fit Cometa in ♏ 29°. 47′, cum Lat. Boreâ 14°. 2′$\frac{1}{2}$.

*Octob.* 6°. Eadem Horâ, distabat à *Genu Ophiuchi* 13°. 22′, & ab *Humero Herculis* 29°. 27′; unde Longitudo ♐ 0°. 33′$\frac{1}{2}$, & Lat. 13°. 36′$\frac{1}{2}$.

*Octob.* 9. 8ʰ. Hæ distantiæ erant 11°. 22′; & 31°. 19′; ac proinde locus Cometæ ♐ 2°. 1′, cum Lat. Boreâ 11°. 56′.

*Octob.* 12. 6ʰ. 30′ *Haphniæ*, Consensu utriusq; Observatoris, erat Cometæ locus ♐ 1°. 50′, cum Lat. 9°. 45′ Bor. Sed cum hoc è filaribus tantum extensionibus per Stellas remotiores concluſum sit, quæ observandi methodus in minimis vix satis fida, nollem Cometæ Motum apparentem jam tum Retrogradum factum hinc adstruere.

*Octob.* 16. 6ʰ. 15′ *Pragæ*, *Keplerus* ultimâ vice Cometam vidit, idq; raptim inter nubes: Stabat, *ait*, humilis admodum, in Verticali qui circiter dimidiâ Lunæ diametro occidentalior erat ipso *Genu* ($\zeta$) *Ophiuchi*, tantum infra *Genu* ut quasi quatuor, certe plus quam tres, distantiæ duarum in *Manû* interesse viderentur. De hac observatione vide *Longomontanum*, ubi *Keplerum* redarguit nimis securè Cometam ad Latitudinem 6°$\frac{1}{2}$ *gr.* deprimentem; cum ex dicto situ illum non minorem habuisse Longitudinem quam ♐ 2°. 10′, nec Latitudinem 8 *gr.* minorem computat.

Hæc observata è *Kepleri* libello *de Cometis* anno 1619 *Augustæ Vindelicorum* edito, & ex *Appendice Astronomiæ Danicæ Longomontani* desumpta (quæ tamen optassem majori cum studio descripta, præsertim juxta finem apparitionis) cursum hujus Cometæ mediocriter quidem designant; satis evidenter vero commonstrant unum eundemq; fuisse cum eo Anni 1682, eodem plane argumento quo *Martem*, diutius sub Solis radiis aliquando latitantem, eundem esse Planetam novimus.

Etenim uterq; Cometa Retrogradus, & idem specie Orbis utriq; communis vix majori Nodorum & Perihelii motu diversus reperitur, quam qui post tot annos in Planetarum superiorum Orbibus agnoscitur. Cum autem inter annos 1531 & 1607 intersint Anni 76, Semiaxem ejus paulo majorem feci, nempe qui sit ad mediam Solis distantiam ut 76$\frac{2}{3}$ sive 17,9422 ad 1; distantiamq; Periheliam proportionaliter auxi, id etiam postulantibus Observationibus, ut fit 0,58507, cujus Logarithmus 9,767207. Nodum autem habuit

Ascen-

Ascendentem ad ♉ 17°. 48′. 40″, cum Inclinatione Plani ad Eclipticam 17°. 20′; Perihelion vero in ♒ 1°. 3′. 40″; & Temp. æquat. Perihelii *Octob.* 16°. 21ʰ. 44′ *Londini.* Motus etiam medius ejus diurnus fit pars septuagesima sexta diurni Solis, sive 0,000226344, cujus Logarithmus 6,354769.

His positis Elementis, eâdem omnino calculi methodo quâ in præcedentibus usus sum, hujus Cometæ Observata qualia qualia cum Numeris Tabulæ nostræ contuli; ac licet in aliquibus ex ultimis diversitas paulo nimia reperiatur, hoc maximâ ex parte Observationibus ipsis parum sibi congruis tribuendum esse, facile perspiciet Candidus Lector.

| M DC VII. *Temp. Æquat.* | | | *Cometæ Long. Observat.* | | | *Lat. Bor. Observat.* | | | *Cometæ Long. Comput.* | | | *Lat. Bor. Comput.* | | | *Differen. Longit.* | | *Differen. Latit.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D. | H. | ′ | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | ′ | ″ | ′ | ″ |
| *Sept.* 16 | 13 | 51 | ♌ 21 | 49 | 0 | 36 | 12 | 0 | ♌ 21 | 55 | 56 | 36 | 20 | 4 | + 6 | 56 | + 8 | 4 |
| 18 | 7 | 20 | ♍ 12 | 2 | 0 | 40 | 0 | 0 | ♍ 12 | 3 | 15 | 39 | 50 | 0 | + 1 | 15 | −10 | 0 |
| 21 | 6 | 30 | ♎ 16 | 48 | 0 | 37 | 12 | 0 | ♎ 16 | 45 | 13 | 37 | 11 | 2 | − 2 | 47 | − 0 | 58 |
| 25 | 5 | 36 | ♏ 12 | 12 | 0 | | | | ♏ 12 | 8 | 47 | | | | − 3 | 13 | | |
| 27 | 6 | 30 | 18 | 50 | 0 | 23 | 20 | 0 | 18 | 44 | 40 | 23 | 16 | 0 | − 5 | 20 | − 4 | 0 |
| *Oct.* 1 | 5 | 25 | 26 | 0 | 0 | 17 | 40 | 0 | 25 | 58 | 40 | 17 | 45 | 46 | − 1 | 20 | + 5 | 46 |
| 2 | 5 | 12 | 27 | 5 | 0 | 16 | 40 | 0 | 27 | 7 | 12 | 16 | 44 | 0 | + 2 | 12 | + 4 | 0 |
| 5 | 7 | 15 | ♏ 29 | 47 | 0 | 14 | 2 | 20 | ♏ 29 | 39 | 25 | 14 | 5 | 35 | − 7 | 35 | + 3 | 15 |
| 6 | 7 | 15 | ♐ 0 | 33 | 30 | 13 | 36 | 30 | ♐ 0 | 14 | 0 | 13 | 22 | 55 | −19 | 30 | −13 | 35 |
| 9 | 6 | 45 | 2 | 0 | 50 | 11 | 56 | 0 | 1 | 25 | 7 | 11 | 33 | 48 | −34 | 43 | −22 | 12 |
| 12 | 5 | 25 | 1 | 50 | 0 | 9 | 45 | 0 | 2 | 1 | 17 | 10 | 4 | 36 | +11 | 17 | +19 | 36 |
| 16 | 5 | 0 | ♐ 2 | 10 | 0 | 8 | 0 | 0 | ♐ 2 | 14 | 32 | 8 | 24 | 10 | + 4 | 32 | +24 | 10 |

Hic obiter notandum occurrit, Nodos hujus Cometæ tres gradus præcessisse eos Cometæ anni 1682, motu secundum seriem signorum progressos; dum Perihelion 32′. 20″ tantum promotum est. Sed hoc annorum spatio præcessio Æquinoctiorum fit 1°. 2′. 30″; unde respectu Fixarum, recessit Aphelion dimidio gradu, procedentibus interea Nodis 1°. 57′. In Planetis autem progrediuntur Aphelia ac Nodi recedunt, ob Vires Corporum cœlestium Centripetas, manifesto sese Solis Vitibus immiscentes, easq; interturbantes, quæ alias accuratissimè in subduplicatâ ratione distantiarum à centro ejus reperirentur; unde corpora circa centrum illud revoluta, in Planis quiescentibus & invariatis, gyros Ellipticos in sese redeuntes perpetuo describerent, per *Prop.* 14. Lib. III. *Princip. Natur. Philosophiæ.* Verum hic Cometa motu Retrogrado fertur; unde ob easdem causas Aphelion ejus regredi, Nodiq; promoveri debent in Cœlo immobili, propter quas Planetarum Nodi regrediuntur & Aphelia procedunt.

Objiciat

Objiciat fortaſſe nonnullus Inclinationum & Periodorum diverſitatem, eâ quæ in revolutionibus ejuſdem Planetæ obſervatur multo majorem; cum nempe una Periodus alteram pluſquam ſpatio annuo excedat, & Inclinatio Cometæ Anni 1682 totis viginti duobus minutis primis ſuperet Inclinationem motui Cometæ anni 1607 competentem. Perpendas tamen, obſecro, ea quæ ad finem Tabularum noſtrarum *Saturni* monuimus, ubi unam iſtius Planetæ Periodum, aliquando tredecim diebus aliâ diuturniorem fuiſſe monſtravimus; idq; evidenter fieri Vi Gravitatis verſus *Jovis* centrum tendentis, quæ quidem Vis in paribus diſtantiis milleſima fere pars eſt Vis Solis ipſius, quâ in Orbibus ſuis retinentur Planetæ. Computo autem accuratius inſtituto, Vires *Jovis* in *Saturnum*, *ex gr.* in Conjunctione ut vocant magnâ, *Januarii* 26° anno 1683 factâ, inveniuntur ad Vim Solis in eundem *Saturnum* ut 1 ad 186; Summa igitur Virium eſt ad Vim Solis ut 187 ad 186. Sed ad eaſdem diſtantias à centro, revolventium in circulo Tempora Periodica ſunt in ſubduplicata ratione Virium quibus urgentur: Proinde auctâ Gravitate parte ſui 186ma, abbreviaretur Periodus parte 374ta circiter, hoc eſt toto Menſe in *Saturno*. Quanto magis hujuſmodi erroribus obnoxius erit hic Cometa, qui quatuor pene vicibus altius excurrit *Saturno*, cujuſq; Velocitas, parte ſui 120mâ minore aucta, poterit Orbem Ellipticum in Parabolicum immutare?

Accidit autem, currente æſtate anni 1681, Cometam anno ſequente viſum, in deſcenſu ſuo verſus Solem, *Jovi* ita conjunctum fuiſſe, & per plures menſes eidem adeo vicinum, ut toto illo tempore parte quaſi quinquageſimâ Virium quæ Solem petebant, verſus centrum *Jovis* ſimul urgeretur: Unde, juxta Gravitatis Theoriam, arcus Orbis Elliptici, quem abſente *Jove* Cometa deſcribere debuiſſet, jam flexu Hyperboliformi *Jovem* reſpiciente intortus, ſpeciem Curvæ admodum compoſitæ atq; hactenus *Geometris* intractabilis induceret; in qua Corporis moti Velocitas & directio, ab iis quæ aliàs in Ellipſi fierent, pro ratione cauſæ, diverſæ provenirent.

Hinc ratio reddi poteſt immutatæ Inclinationis: Nam cum Cometa in hoc tranſitu *Jovem* habuerit Boream verſus pene normaliter in viam ejus erectum, incurvari debuit iſta Orbis portio in eandem plagam; ac proinde Tangentibus ejus majoribus cum Angulis ad Planum Eclipticæ inclinatis, angulus Inclinationis Plani ipſius augeretur neceſſariò. Præterea Cometa diuturniori morâ in viciniâ *Jovis* hærens, dum è partibus à Sole remotioribus tardiùs eum acceſſit, ac junctis utriuſq; centri viribus urgeretur, plus Velocitatis aſcititiæ acquiſiviſſe debuit, quam in receſſu ejus à *Jove* citatiori motu ac breviori tempore facto, in contrarias partes agentibus viribus, amittere

potuit: Proinde auctâ hoc exceſſû velocitate propriâ Cometæ, probabile fit reditum ejus non niſi poſt Periodum longiorem 76 & amplius annorum, circa finem anni 1758 vel initium proximi, futurum. Sed hæc levi tantum calamo à nobis tacta, Poſterorum ſtudio penitius excutienda permittimus, poſtquam rei veritas ex eventu comprobata fuerit.

Quod Cometa anni 1531 ab *Apiano* obſervatus idem fuerit cum jam deſcripto ſatis patet ex Periodo, ex motu ejus inter Solem & Terram Retrogrado, ex ſitu Perihelii & Nodorum & ex Inclinatione à prioribus non multum diverſis: Quæ tamen omnia ſi quis accuratè definire ſuſciperet, fruſtraneam certè navaret operam, propter Obſervationes nimis imperfectas, rudi Minervâ & inſtrumento parvo Azimuthali captas, & ad oſtendendum Caudæ Cometicæ aſcenſum in partes à Sole averſas unicè deſtinatas.

Nequis tamen cauſetur quicquam huc ſpectans à nobis omiſſum, *Apiani* ipſius opus *Aſtronomicon Cæſareum*, *Carolo* V. *Cæſari* dicatum, & apud nos tandem ægrè inventum conſului, atq; inde ſequentia non alibi edita deprompſi.

Anno 1531 *Ingolſtadii* ad *Danubium* (ſub Latitudine 48°. 40′, & Longitudine 11° ½ grad. vel 46 Min. Temp. à *Londino* ad ortum) *Auguſti* 13°. veſperi, primâ vice obſervavit Cometam *Apianus* Corum verſus: Ac Stellâ clarâ *Arcturi* ipſam Occidentis plagam occupante, vel, ut aiunt, in primo Verticali conſtitutâ, Cometa altus 7°. 56′ erat 49°. 26′ Occidente Borealior. Poſterâ Nocte *Aug.* 14°, revoluto Cœlo, erat altitudo Cometæ 8°. 29′, jam 45°. 22′ verſus Boream *Aug.* 15° in eodem Cœli ſitu, Cometa 9°. 00′ altus Borealior erat 41°. 22′. *Aug.* 16°. altus 9°. 43′ erat Bor. 35°. 13′ tantum. *Aug.* 17°, in Azimuthâ 30°. 46′ ab Occidente, altus erat 10°. 14′. *Aug.* 18°, altus 10°. 39′, ab Occidente 24°. 42′. Deinde, poſt triduum nubibus obductum, *Aug.* 22, in eodem Sphæræ ſtellatæ ſitu, Cometa altus 11°. 25′ erat 7°. 34′ ab Occidente verſus Boream: Deniq; *Aug.* 23° *Arcturo* in Occidente ſito, eo Borealior erat Cometa non niſi 3°. 50′, in altitudine 11°. 26′.

Supponit autem Obſervator, pro Aſtronomiâ ſuæ ætatis, *Arcturum* tunc habuiſſe ♎ 16°. 59′, cum Lat. 31°. 30′ Bor. perperam pro ♎ 17°. 41′, cum Lat. 30°. 57′, uti ex certioribus obſervatis conſtat. Et ſubſtituto hoc ejus loco, fit Aſcenſio Recta Medii Cœli, *Arcturo Ingolſtadii* Occidentem occupante, 278°. 10′. Hinc altitudinibus à Refractione purgatis, calculo ſatis ſuperq; accurato, proveniunt loca Cometæ ut ſequitur.

| MDXXXI. Ingolst. *Temp. App.* | | | *Cometæ Asc. Recta.* | | | *Cometæ Decl. Bor.* | | | *Cometæ Long. Observat.* | | | *Lat. Bor. Observat.* | | | *Longit.* Apiano. | | *Lat. Bor.* Apiano. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D. | H. | ′ | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | ′ | ″ | ′ | ″ |
| *Aug.* 13 | 8 | 26 | 151 | 45 | 45 | 36 | 49 | 25 | ♌ 20 | 16 | 0 | 23 | 30 | 10 | ♌ 19 | 15 | 23 | 15 |
| 14 | 8 | 22 | 156 | 17 | 20 | 35 | 3 | 50 | 24 | 41 | 30 | 23 | 18 | 45 | 23 | 39 | 23 | 2 |
| 15 | 8 | 19 | 160 | 32 | 50 | 33 | 11 | 50 | ♌ 29 | 1 | 0 | 23 | 1 | 30 | 24 | 29 | 22 | 0 |
| 16 | 8 | 15 | 166 | 43 | 20 | 30 | 4 | 30 | ♍ 5 | 36 | 15 | 22 | 21 | 40 | ♍ 4 | 32 | 22 | 1 |
| 17 | 8 | 11 | 170 | 58 | 40 | 27 | 42 | 25 | 10 | 19 | 40 | 21 | 47 | 0 | 9 | 14 | 21 | 25 |
| 18 | 8 | 7 | 176 | 19 | 30 | 24 | 8 | 50 | ♍ 16 | 37 | 0 | 20 | 36 | 15 | ♍ 15 | 30 | 20 | 12 |
| 22 | 7 | 54 | 190 | 6 | 30 | 13 | 27 | 10 | ♎ 3 | 49 | 0 | 16 | 20 | 40 | ♎ 1 | 23 | 16 | 32 |
| 23 | 7 | 50 | 192 | 53 | 30 | 11 | 1 | 20 | ♎ 7 | 25 | 30 | 15 | 13 | 40 | 2 | 51 | 14 | 31 |

Si hæc loca inter se conferantur, statim manifesta sit nimia eorum discrepantia, vitio Instrumenti quo observabantur proculdubio tribuenda. Sed & in deducendis locis ex Observatione tertiâ & duabus ultimis, graviter ab ipso *Apiano* erratum invenies. Etiamsi vero nihil certi & accurati ex tum incertis Datis elici poterit, abunde tamen valent ad ostendendum hunc Cometam cursum tenuisse cursui ejus qui anno 1682 fulsit perquam simílem, ac si Latitudini ejus tres gradus adjicias, pene eundem.

Supervacuum esset Numeros nostros cum his conferre; cum prorsus impossibile sit computo quovis regulari tam irregularia & inter se pugnantia conciliari. Si vero ponatur Periodus 75 annorum, atq; adeo Semiaxis major Ellipseos 17,7845; Distantia Perihelia 0,57993; Nodus Ascendens ♉ 15°. 30′; Inclinatio 17°. 00′, & Perihelion ♒ 1°. 12′; Tempus vero Perihelii Anno 1531 *Augusti* 25ᵈ. 19ʰ. 00′; ac medius Motus diurnus pars septuagesima quinta diurni Solis, sive 0,000229362 cujus Log. 6,360522; habebitur, ope ejusdem Tabulæ, motûs hujus Cometæ supputatio, plerumq; Observationibus magis congrua quam sunt ipsæ Observationes inter se.

Vides itaq; in his tribus consensum Elementorum omnium, miraculi sane loco habendum si fuerint tres diversi Cometæ; vel si non fuerint ejusdem in Ellipsi revoluti tres ad Solem Terramq; accessus diversi. Quocirca si secundum prædicta nostra redierit iterum circa annum 1758, hoc primum ab Homine *Anglo* inventum fuisse non inficiabatur æqua Posteritas.

Atq; hic est Cometarum quasi *Mercurius*, arctiore Orbe ac breviore Periodo Solem ambiens, dum cæteri omnes latius expatiantur, & post Revolutiones longissimas & plus quam seculares, imo plurium seculorum, per exigua tantum intervalla hominum conspectui se produnt; dum scilicet à vicino

cino Sole illustrati fortiore lumine splendent, sensibilesq; exhalant Caudas, quæ non nisi Vapores tenuissimi sunt è materiâ Cometicâ vi caloris agitatâ eliciti, & in æthere tantum non vacuo magnâ cum velocitate sursum protrusi. Sed de hac re Physicâ audi Celeberrimum *NEWTONUM*, sub finem Lib. III. *Principiorum*, pro more suo demonstrativè disputantem.

Hinc fit, ut pari evidentiâ ac in hoc nostro anni 1682, non constet rediisse aliquem alium Cometam. Verum si quid argumenti ex æqualitate Periodorum & ex Phænomenis simularibus peti possit, mirus ille Cometa qui anno 168$\frac{9}{10}$ fulsit, unus idemq; fuit qui anno 1106, regnante apud *Anglos* Rege *Henrico* I, è Solaribus radiis primum emersit " Die *Veneris Februarii* 16° " Vesperi, & per longum postea tempus singulis diebus vesperi conspectus est. " Stella apparuit in Norozephyro, quæ exigua est visa & obscura, verum " radius qui ab ea profluxit admodum clarus esse atq; ingens radius putaba- " tur, versus Euraquilonem fulgens", ut habetur in *Chronico Saxonico*, à Teste oculari ut videtur conscripto. Hæc autem descriptio satis quadrat cum eâ Cometæ anni 168$\frac{9}{10}$, tam ratione prolixæ caudæ, quam situs respectu Solis.

Alius etiam Cometa similis, juxta Consulatum *Lampadii & Orestis* & annum *Christi* 531, Imperante *Justiniano*, vesperi visus est; de quo *Malela* Author *Chronici Antiocheni*, fortassis etiam Testis ocularis, hæc scribit. " Stella " ingens & tremenda in Occidente comparuit, radium album sursum emit- " tens, quam quod fulguris emissionem præ se ferebat *Lampadian* nonnulli " vocitabant. Per Dies autem XX fulsit". Optassem quidem Historicum anni tempestatem qua hæc conspecta sunt prodidisse; manifestum tamen est intervallum annorum inter hunc & illum anno 1106 visum, proximè æquale fuisse intervallo inter annos 1106 & 1681, nempe 575 annorum circiter.

Deductâ autem aliâ Periodo huic æquali, deveniemus ad annum ante *Christum* natum quadragesimum quartum, quo post occisum *Julium Cæsarem*, emersit Cometa maxime insignis, ab Historicis ejus temporis pene omnibus celebratus, & à *Plinio*, *Nat. Hist.* Lib. II. Cap. 24; ubi habentur verba ipsius *Augusti Cæsaris* de hac re: Horum ope ad ipsissimum tempus, situmq; Phænomeni in Cœlis perducimur; quapropter ea hic recitari non pigebit. " In ipsis Ludorum meorum diebus, Sydus crinitum per septem dies, in " regione Cœli quæ sub Septentrionibus, est conspectum. Id oriebatur circa " undecimam horam diei, clarumq; & omnibus Terris conspicuum fuit". Jam Ludos hos suos dedicavit *Augustus Veneri Genetrici* (nam à Deâ *Venere* prognatos se jactavêre *Cæsares*) & à Natalibus suis, die scil. 23° *Septembris* inchoatos per septiduum continuavit; ut ex fragmento antiqui Calendarii

*Romani*

| MDXXXI. Ingolst. *Temp. App.* | | | *Cometæ Asc. Recta.* | | | *Cometæ Decl. Bor.* | | | *Cometæ Long. Observat.* | | | *Lat. Bor. Observat.* | | | *Longit.* Apiano. | | *Lat. Bor.* Apiano. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D. | H. | ′ | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ″ | ° | ′ | ° | ′ |
| *Aug.* 13 | 8 | 26 | 151 | 45 | 45 | 36 | 49 | 25 | ☊ 20 | 16 | 0 | 23 | 30 | 10 | ☊ 19 | 15 | 23 | 15 |
| 14 | 8 | 22 | 156 | 17 | 20 | 35 | 3 | 50 | 24 | 41 | 30 | 23 | 18 | 45 | 23 | 39 | 23 | 2 |
| 15 | 8 | 19 | 160 | 32 | 50 | 33 | 11 | 50 | ☊ 29 | 1 | 0 | 23 | 1 | 30 | ♈ 24 | 29 | 22 | 0 |
| 16 | 8 | 15 | 166 | 43 | 20 | 30 | 4 | 30 | ♍ 5 | 36 | 15 | 22 | 21 | 40 | ♍ 4 | 32 | 22 | 1 |
| 17 | 8 | 11 | 170 | 58 | 40 | 27 | 42 | 25 | 10 | 19 | 40 | 21 | 47 | 0 | 9 | 14 | 21 | 25 |
| 18 | 8 | 7 | 176 | 19 | 30 | 24 | 8 | 50 | ♍ 16 | 37 | 0 | 20 | 36 | 15 | ♍ 15 | 30 | 20 | 12 |
| 22 | 7 | 54 | 190 | 6 | 30 | 13 | 27 | 10 | ♎ 3 | 49 | 0 | 16 | 20 | 40 | ♎ 1 | 23 | 16 | 32 |
| 23 | 7 | 50 | 192 | 53 | 30 | 11 | 1 | 20 | ♎ 7 | 25 | 30 | 15 | 13 | 40 | 2 | 51 | 14 | 31 |

Si hæc loca inter se conferantur, statim manifesta fit nimia eorum discrepantia, vitio Instrumenti quo observabantur proculdubio tribuenda. Sed & in deducendis locis ex Observatione tertiâ & duabus ultimis, graviter ab ipso *Apiano* erratum invenies. Etiamsi vero nihil certi & accurati ex tum incertis Datis elici poterit, abunde tamen valent ad ostendendum hunc Cometam cursum tenuisse cursui ejus qui anno 1682 fulsit perquam similem, ac si Latitudini ejus tres gradus adjicias, pene eundem.

Supervacuum esset Numeros nostros cum his conferre; cum prorsus impossibile sit computo quovis regulari tam irregularia & inter se pugnantia conciliari. Si vero ponatur Periodus 75 annorum, atq; adeo Semiaxis major Ellipseos 17,7845; Distantia Perihelia 0,57993; Nodus Ascendens ♉ 15°. 30′; Inclinatio 17°. 00′, & Perihelion ♒ 1°. 12′; Tempus vero Perihelii Anno 1531 *Augusti* 25$^{d}$. 19$^{h}$. 00′; ac medius Motus diurnus pars septuagesima quinta diurni Solis, sive 0,000229362 cujus Log. 6,360522; habebitur, ope ejusdem Tabulæ, motûs hujus Cometæ supputatio, plerumq; Observationibus magis congrua quam sunt ipsæ Observationes inter se.

Vides itaq; in his tribus consensum Elementorum omnium, miraculi sane loco habendum si fuerint tres diversi Cometæ; vel si non fuerint ejusdem in Ellipsi revoluti tres ad Solem Terramq; accessus diversi. Quocirca si secundum prædicta nostra redierit iterum circa annum 1758, hoc primum ab Homine *Anglo* inventum fuisse non inficiabitur æqua Posteritas.

Atq; hic est Cometarum quasi *Mercurius*, arctiore Orbe ac breviore Periodo Solem ambiens, dum cæteri omnes latius expatiantur, & post Revolutiones longissimas & plus quam seculares, imo plurium seculorum, per exigua tantum intervalla hominum conspectui se produnt; dum scilicet à vi-

cino Sole illuſtrati fortiore lumine ſplendent, ſenſibileſq; exhalant Caudas, quæ non niſi Vapores tenuiſſimi ſunt è materiâ Cometicâ vi caloris agitatâ eliciti, & in æthere tantum non vacuo magnâ cum velocitate ſurſum protruſi. Sed de hac re Phyſicâ audi Celeberrimum *NEUTONUM*, ſub finem Lib. III. *Principiorum*, pro more ſuo demonſtrativè diſputantem.

Hinc fit, ut pari evidentiâ ac in hoc noſtro anni 1682, non conſtet rediiſſe aliquem alium Cometam. Verum ſi quid argumenti ex æqualitate Periodorum & ex Phænomenis ſimularibus peti poſſit, mirus ille Cometa qui anno 1680 fulſit, unus idemq; fuit qui anno 1106, regnante apud *Anglos* Rege *Henrico* I, è Solaribus radiis primum emerſit " Die *Veneris Februarii* 16° " Veſperi, & per longum poſtea tempus ſingulis diebus veſperi conſpectus eſt. " Stella apparuit in Notozephyro, quæ exigua eſt viſa & obſcura, verum " radius qui ab ea profluxit admodum clarus eſſe atq; ingens radius putaba- " tur, verſus Euraquilonem fulgens ", ut habetur in *Chronico Saxonico*, à Teſte oculari ut videtur conſcripto. Hæc autem deſcriptio ſatis quadrat cum eâ Cometæ anni 1680, tam ratione prolixæ caudæ, quam ſitus reſpectu Solis.

Alius etiam Cometa ſimilis, juxta Conſulatum *Lampadii & Oreſtis* & annum *Chriſti* 531, Imperante *Juſtiniano*, veſperi viſus eſt; de quo *Malela* Author *Chronici Antiocheni*, fortaſſis etiam Teſtis ocularis, hæc ſcribit. " Stella " ingens & tremenda in Occidente comparuit, radium album ſurſum emit- " tens, quam quod fulguris emiſſionem præ ſe ferebat *Lampadian* nonnulli " vocitabant. Per Dies autem XX fulſit ". Optaſſem quidem Hiſtoricum anni tempeſtatem qua hæc conſpecta ſunt prodidiſſe; manifeſtum tamen eſt intervallum annorum inter hunc & illum anno 1106 viſum, proximè æquale fuiſſe intervallo inter annos 1106 & 1681, nempe 575 annorum circiter.

Deductâ autem aliâ Periodo huic æquali, deveniemus ad annum ante *Chriſtum* natum quadrageſimum quartum, quo poſt occiſum *Julium Cæſarem*, emerſit Cometa maxime inſignis, ab Hiſtoricis ejus temporis pene omnibus celebratus, & à *Plinio*, *Nat Hiſt.* Lib. II. Cap. 24; ubi habentur verba ipſius *Auguſti Cæſaris* de hac re: Horum ope ad ipſiſſimum tempus, ſitumq; Phænomeni in Cœlis perducimur; quapropter ea hic recitari non pigebit. " In ipſis Ludorum meorum diebus, Sydus crinitum per ſeptem dies, in " regione Cœli quæ ſub Septentrionibus, eſt conſpectum. Id oriebatur circa " undecimam horam diei, clarumq; & omnibus Terris conſpicuum fuit ". Jam Ludos hos ſuos dedicavit *Auguſtus Veneri Genetrici* (nam à Deâ *Venere* prognatos ſe jactavêre *Cæſares*) & à Natalibus ſuis, die ſcil. 23° *Septembris* inchoatos per ſeptiduum continuavit; ut ex fragmento antiqui Calendarii

*Romani*

*Romani* apud *Gruterum*, pag. 135 *Nov. Edit.* colligere licet. Per hos autem septem dies comparuit Cometa teste *Cæsare*: Nihil tamen obstat quin etiam ante & post dies illos conspicuus fuerit. Quod vero dicatur visum fuisse Cometam *sub Septentrionibus*, minime intelligendum est quasi in Boreâ Cœli parte sub Polo apparuerit, sed sub *septem Trionibus*, *i. e.* infra Stellas lucidiores *Vrsæ Majoris*. *Horâ* autem *undecimâ diei* ortum fuisse nullo modo concipi potest; quapropter loco *diei* legatur *noctis*, vel omissâ eâ voce, uti legitur apud *Suetonium*: Sole enim prope æquinoctium autumnale tum constituto, hora undecima *Romana*, quâ ortus Cometa dicitur, cœpit à quartâ matutinâ nostri computi; ita ut inter quartam & quintam, quasi sesquihorâ ante Solis exortum oriri judicabatur: Præcedebat igitur Solem viginti circiter gradus, quod de principio apparitionis, vel saltem septidui dicti, intelligi debet. Quo tempore vero sub septem Trionibus fulsit, multo citius oriebatur, ac latitudinem habuit Borealem sat magnam, motu Retrogrado è Signo *Virginis* in *Cancrum* latus; emenso scilicet spatio inter *Leonem* & *Vrsam* intermedio.

Jam si retineatur situs Orbis Cometæ anni 1680 respectu Fixarum, ac ponatur Perihelion ejus anno ante Christum natum 44^to^, circa *Septembris* diem 18^vum^. Calculo utcunque instituto, statim patebit cursum Cometæ, in ascensu ejus à Sole, ubi maximam projecit Caudam, *clarumq; erat & omnibus Terris conspicuum sydus*, cursui hujus ab *Augusto Cæsare* descripti satis congruere. Proinde haudquaquam absurdum erit si Cometam à *Cæsare* visum, absolutis tribus revolutionibus, anno 1680 nobis denuò affulsisse credamus; præsertim cum ad æqualia temporis intervalla, annis fc. *Christi* 531 & 1106, similes quoq; Cometæ apparuerint.

Ponamus itaq; Periodum ejus 575 annorum esse proximè. Unde fiet Semiaxis major Ellipseos $575\frac{2}{3}$ sive 69,14785, qualium media Terræ à Sole distantia sit 1. Earundem vero partium sit distantia perihelia 0,006175, qualem invenimus observationibus maxime congruam, atq; adeo Semiaxis Orbis conjugatus 0,92410; vel posito semiaxe majore = 1, fiet distantia Perihelia 0,000089301 cujus Logarithmus 5,950858; & Semiaxis minor 0,0133641 ejusq; Logarithmus 8,125939: His jactis fundamentis, Tabulam sequentem concinnavi, ejusdem pene formæ cum præcedente: Cum vero ob viciniam Solis non conspici poterit hic Cometa nisi quarto die à Perihelio, inchoatur Tabula à gradu quinto Anomaliæ Eccentri: Anguli etiam numerantur ab Aphelio, & Logarithmi sunt ipsarum rationum quas habent veræ Cometæ à Sole distantiæ ad mediam Solis à Terrâ distantiam. Porro ad decimas graduum computata est in priori parte, ne secundis differentiis ad debitam interpolationem opus sit.

*TABULA*

# TABULA MOTUS COMETÆ
## ANNIS MDCLXXX & MDCLXXXI VISI.

| Anom. Eccentri. | Medius Motus Cometæ. | Diff. med. Motus. | Angulus ab Aphelio. | Diff. Angulorum. | Distantiæ à Sole Logar. | Differentia Logar. |
|---|---|---|---|---|---|---|
| ° ′ | | | ° ′ ″ | ′ ″ | | |
| 5 0 | 0,00011850 | | 17 24 12 | | 9,430205 | |
| | | 693 | | 20 12 | | 16801 |
| 6 | 0,00012543 | | 17 4 0 | | 9,447007 | |
| | | 720 | | 19 26 | | 16490 |
| 12 | 0,00013263 | | 16 44 34 | | 9,463497 | |
| | | 747 | | 18 44 | | 16190 |
| 18 | 0,00014011 | | 16 25 50 | | 9,479687 | |
| | | 776 | | 18 2 | | 15898 |
| 24 | 0,00014787 | | 16 7 48 | | 9,495585 | |
| | | 804 | | 17 24 | | 15617 |
| 5 30 | 0,00015591 | | 15 50 24 | | 9,511202 | |
| | | 834 | | 16 47 | | 15346 |
| 36 | 0,00016425 | | 15 33 37 | | 9,526548 | |
| | | 864 | | 16 13 | | 15084 |
| 42 | 0,00017289 | | 15 17 24 | | 9,541632 | |
| | | 893 | | 15 39 | | 14830 |
| 48 | 0,00018182 | | 15 1 45 | | 9,556462 | |
| | | 925 | | 15 9 | | 14585 |
| 54 | 0,00019107 | | 14 46 36 | | 9,571047 | |
| | | 955 | | 14 38 | | 14347 |
| 6 0 | 0,00020062 | | 14 31 58 | | 9,585394 | |
| | | 988 | | 14 11 | | 14118 |
| 6 | 0,00021050 | | 14 17 47 | | 9,599512 | |
| | | 1020 | | 13 43 | | 13894 |
| 12 | 0,00022070 | | 14 4 4 | | 9,613406 | |
| | | 1053 | | 13 17 | | 13678 |
| 18 | 0,00023123 | | 13 50 47 | | 9,627084 | |
| | | 1086 | | 12 54 | | 13469 |
| 24 | 0,00024209 | | 13 37 53 | | 9,640553 | |
| | | 1121 | | 12 29 | | 13265 |
| 6 30 | 0,00025330 | | 13 25 24 | | 9,653818 | |
| | | 1154 | | 12 7 | | 13068 |
| 36 | 0,00026484 | | 13 13 17 | | 9,666886 | |
| | | 1190 | | 11 46 | | 12877 |
| 42 | 0,00027674 | | 13 1 31 | | 9,679763 | |
| | | 1225 | | 11 25 | | 12690 |
| 48 | 0,00028899 | | 12 50 6 | | 9,692453 | |
| | | 1262 | | 11 6 | | 12509 |
| 54 | 0,00030161 | | 12 39 0 | | 9,704962 | |
| | | 1298 | | 10 47 | | 12333 |
| 7 0 | 0,00031459 | | 12 28 13 | | 9,717295 | |
| | | 1335 | | 10 39 | | 12160 |
| 6 | 0,00032794 | | 12 17 44 | | 9,729455 | |
| | | 1372 | | 10 12 | | 11995 |
| 12 | 0,00034166 | | 12 7 32 | | 9,741450 | |
| | | 1411 | | 9 55 | | 11833 |
| 18 | 0,00035577 | | 11 57 37 | | 9,753283 | |
| | | 1450 | | 9 39 | | 11674 |
| 24 | 0,00037027 | | 11 47 58 | | 9,764957 | |
| | | 1489 | | 9 24 | | 11521 |
| 7 30 | 0,00038516 | | 11 38 34 | | 9,776478 | |
| | | 1528 | | 9 10 | | 11371 |
| 36 | 0,00040044 | | 11 29 24 | | 9,787849 | |
| | | 1569 | | 8 55 | | 11224 |
| 42 | 0,00041613 | | 11 20 29 | | 9,799073 | |
| | | 1610 | | 8 42 | | 11082 |
| 48 | 0,00043223 | | 11 11 47 | | 9,810156 | |
| | | 1651 | | 8 28 | | 10943 |
| 54 | 0,00044874 | | 11 3 19 | | 9,821099 | |
| | | 1693 | | 8 16 | | 10808 |
| 8 0 | 0,00046567 | | 10 55 3 | | 9,831907 | |
| | | 1735 | | 8 4 | | 10675 |
| 6 | 0,00048302 | | 10 46 59 | | 9,842583 | |
| | | 1778 | | 7 52 | | 10546 |
| 12 | 0,00050080 | | 10 39 7 | | 9,853129 | |
| | | 1822 | | 7 41 | | 10419 |
| 18 | 0,00051902 | | 10 31 26 | | 9,863548 | |
| | | 1865 | | 7 30 | | 10297 |
| 24 | 0,00053767 | | 10 23 56 | | 9,873845 | |
| | | 1910 | | 7 20 | | 10178 |
| 8 30 | 0,00055677 | | 10 16 36 | | 9,884023 | |

# TABULA MOTUS COMETÆ
## ANNIS MDCLXXX & MDCLXXXI VISI.

| Anom. Eccentri | Medius Motus Cometæ. | Diff. med. Motus. | Angulus ab Aphelio. | Diff. Angulorum: | Distantiæ à Sole Logar. | Differentia Logar. |
|---|---|---|---|---|---|---|
| ° ′ | | | ° ′ ″ | ′ ″ | | |
| 8 30 | 9,00055677 | | 10 16 36 | | 9,884023 | |
| | | 1955 | | 7 9 | | 10060 |
| 36 | 9,00057632 | | 10 9 27 | | 9,894083 | |
| | | 2001 | | 7 0 | | 9944 |
| 42 | 9,00059633 | | 10 2 27 | | 9,904027 | |
| | | 2047 | | 6 51 | | 9832 |
| 48 | 9,00061680 | | 9 55 36 | | 9,913859 | |
| | | 2093 | | 6 41 | | 9723 |
| 54 | 9,00063773 | | 9 48 55 | | 9,923582 | |
| | | 2141 | | 6 32 | | 9615 |
| 9 0 | 9,00065914 | | 9 42 23 | | 9,933197 | |
| | | 4424 | | 12 39 | | 18916 |
| 12 | 9,00070338 | | 9 29 44 | | 9,952113 | |
| | | 4619 | | 12 8 | | 18513 |
| 24 | 9,00074957 | | 9 17 36 | | 9,970626 | |
| | | 4818 | | 11 37 | | 18127 |
| 36 | 9,00079775 | | 9 5 59 | | 9,988753 | |
| | | 5021 | | 11 9 | | 17756 |
| 48 | 9,00084797 | | 8 54 50 | | 0,006509 | |
| | | 5228 | | 10 42 | | 17399 |
| 10 0 | 9,00090025 | | 8 44 8 | | 0,023908 | |
| | | 5440 | | 10 18 | | 17058 |
| 12 | 9,00095465 | | 8 33 50 | | 0,040966 | |
| | | 5657 | | 9 54 | | 16729 |
| 24 | 9,00101122 | | 8 23 56 | | 0,057695 | |
| | | 5876 | | 9 31 | | 16410 |
| 36 | 9,00106998 | | 8 14 25 | | 0,074105 | |
| | | 6100 | | 9 11 | | 16107 |
| 48 | 9,00113098 | | 8 5 14 | | 0,090212 | |
| | | 6328 | | 8 51 | | 15812 |
| 11 0 | 9,00119426 | | 7 56 23 | | 0,106024 | |
| | | 6561 | | 8 32 | | 15526 |
| 12 | 9,00125987 | | 7 47 51 | | 0,121550 | |
| | | 6798 | | 8 14 | | 15253 |
| 24 | 9,00132785 | | 7 39 37 | | 0,136803 | |
| | | 7038 | | 7 57 | | 14990 |
| 36 | 9,00139823 | | 7 31 40 | | 0,151793 | |
| | | 7283 | | 7 42 | | 14732 |
| 48 | 9,00147106 | | 7 23 58 | | 0,166525 | |
| | | 7532 | | 7 25 | | 14486 |
| 12 0 | 9,00154638 | | 7 16 33 | | 0,181011 | |
| | | 7786 | | 7 12 | | 14248 |
| 12 | 9,00162424 | | 7 9 21 | | 0,195259 | |
| | | 8043 | | 6 58 | | 14013 |
| 24 | 9,00170467 | | 7 2 23 | | 0,209272 | |
| | | 8305 | | 6 44 | | 13791 |
| 36 | 9,00178772 | | 6 55 39 | | 0,223063 | |
| | | 8571 | | 6 32 | | 13572 |
| 48 | 9,00187343 | | 6 49 7 | | 0,236635 | |
| | | 8841 | | 6 20 | | 13364 |
| 13 0 | 9,00196184 | | 6 42 47 | | 0,249999 | |
| | | 9114 | | 6 9 | | 13159 |
| 12 | 9,00205298 | | 6 36 38 | | 0,263158 | |
| | | 9393 | | 5 57 | | 12960 |
| 24 | 9,00214691 | | 6 30 41 | | 0,276118 | |
| | | 9675 | | 5 47 | | 12766 |
| 36 | 9,00224366 | | 6 24 54 | | 0,288884 | |
| | | 9962 | | 5 37 | | 12581 |
| 48 | 9,00234328 | | 6 19 17 | | 0,301465 | |
| | | 10252 | | 5 28 | | 12399 |
| 14 0 | 9,00244580 | | 6 13 49 | | 0,313864 | |
| | | 10547 | | 5 19 | | 12222 |
| 12 | 9,00255127 | | 6 8 30 | | 0,326086 | |
| | | 10846 | | 5 9 | | 12049 |
| 24 | 9,00265973 | | 6 3 21 | | 0,338135 | |
| | | 11149 | | 5 1 | | 11885 |
| 36 | 9,00277122 | | 5 58 19 | | 0,350020 | |
| | | 11456 | | 4 53 | | 11721 |
| 48 | 9,00288578 | | 5 53 26 | | 0,361741 | |
| | | 11767 | | 4 45 | | 11562 |
| 15 0 | 9,00300345 | | 5 48 41 | | 0,373303 | |

Quod Plani hujus Orbis Elliptici longiſſime extenſi poſitionem attinet, Nodos eoſdem ac in Orbe Parabolico ſuperius deſcripto retinemus, nempe ad 2°. 2′ *Capricorni* & *Cancri*; cum Inclinatione ad Planum Eclipticæ 61°. 6′. 48″. Perihelion vero Cometæ, in hoc Plano ſecundum ſeriem Signorum moti, incidit in ♐ 22°. 44′. 25″, adeoq; Aphelion in ♊ 22°. 44′. 25″, ſive 9°. 17′. 35″ ante Nodum deſcendentem. Tempus æquatum Perihelii pono *Decemb.* 7°. 23ʰ. 9′ *Londini*; Anno ſcil. 1680. Motus autem medius diurnus fit $\frac{1}{3\,7\,5}$ diurni Solis; hoc eſt 0,0000299167 ejuſq; Logarithmus 5,475914, cui ſi addatur Logarithmus Temporis ante vel poſt Perihelion, ſtatim habebitur Motus medius ad datum momentum.

Haud abs re erit fortaſſe ſi hujus etiam calculi Exemplum apponam. Anno 1680 *Novemb.* 3. 16ʰ. 47′ *Temp. æquat.* & ad Meridianum *Londini* reducto, obſervavit D. *Gottfried Kirch*, *Coburgi Saxoniæ*, Cometam, in deſcenſu verſus Solem, adhuc omni caudâ deſtitutum, ac inſtar Nebulæ albentis abſq; Nucleo, vix nudis Oculis conſpicuum; dum ſcil. fortunâ duce *Lunam* & *Martem* ei vicinum Teleſcopio circumluſtraret. Inter adjunctas autem Fixulas ſitum Phænomeni ſatis accurate deſcriptum dedit: Unde opitulante Reverendi D. *Pound* curioſâ induſtriâ, locum ejus reſpectu Eclipticæ ſatis accuratè obtinui ♌ 29°. 51′, cum Latitudine Boreâ 1°. 18′. De hac autem Obſervatione vide *Philoſoph. Tranſact.* N° 342.

Jam præceſſit hæc obſervatio Tempus Perihelii 34ᵈ. 6ʰ. 22′, ſive in decimalibus diei 34,2653. Hujus Log. 1,534854 Logarithmo medii Motus diurni additus fit 7,010768 Logarithmus medii Motus ad datum Tempus, qui proinde ſit ,001025105. Hunc Motum medium invenio in Tabulâ inter 10°. 24′, & 10°. 36′. Anomaliæ Eccentri, & interpolatione rite inſtitutâ provenit angulus poſt Aphelion 8°. 21′. 37″, & Logarithmus diſtantiæ veræ Cometæ à Sole 0,061658. Loco Aphelii ♊ 22°. 44′. 25″ adde 8°. 21′. 37″, fiet locus Cometæ in Orbe ſuo ♋ 1°. 6′. 2″, hoc eſt 0°. 55′. 58″ ante Nodum deſcendentem: Hinc locus ejus Heliocentricus ad Ecliptican reductus erit ♋ 1°. 34′. 58″ cum 0°. 49′. 0″ Lat. Bor. & Diſtantiæ curtatæ Logarithmus 0,061614. Habuit autem Sol eodem tempore ♏ 22°. 44′. 50″, ac Log. diſtantiæ ejus à Terrâ 9,994672. E quibus datis, ſi Calculus Trigonometricus more in Planetis uſitato adhibeatur, prodibit locus Cometæ Geocentricus ♌ 29°. 51′. 22″ cum Latitudine Borea 1°. 17′. 32″, omnino prout obſervatus eſt.

Hæc autem *Kerchii* obſervatio ſane nobilis eſt, non tantum quod tredecim diebus prior ſit cæterorum omnium obſervatis; ſed quod quaſi ſola & unica ſit è multis, apud exteros de Cometâ matutino evulgatis, cui plena fides adhiberi

hiberi poſſit. Iis quidem poliendis atq; inter ſe conferendis quantum operæ impendit ſagacitas *Newtoniana*, vides apud ipſum in *Principiorum* Lib. III. quas tamen ut inter ſe ubiq; ferè nimium diſſidentes, nec debitâ curâ inſtrumentiſve idoneis captas, nos merito prætereundas cenſemus; cum Obſervata potius juxta Calculum, quam Calculus juxta Obſervata, æſtimanda videantur.

Verum ſequens Tabella curatiſſimam Motûs Cometæ veſpertini ſeriem exhibet, magna ex parte ex Obſervationibus Sextante *Grenovicenſi* prædicto habitis deductam, ac juxta reformata Fixarum loca è Catalogo *Britannico* deſumpta, quoad ejus fieri potuit, verificatam. Duæ tantum ultimæ ipſius *Newtoni* ſunt, Cometæ evaneſcentis motum ad Stellas in *Pede Perſei* artificioſè æſtimantis. Calculo autem accuratè juxta præmiſſa Elementa inſtituto, ecce conſenſum Supputatori quantumvis ſcrupuloſo abunde ſatisfacturum.

| MDCLXXX. *Temp.* | *Æquat.* | *Cometæ Long. Obſervat.* | *Lat. Bor. Obſervat.* | *Cometæ Long. Comput.* | *Lat. Bor. Comput.* | *Differen. Longit.* | *Differen. Latit.* |
|---|---|---|---|---|---|---|---|
| D. H. ′ | | ° ′ ″ | ° ′ ″ | ° ′ ″ | ° ′ ″ | ′ ″ | ′ ″ |
| *Nov.* 3 | 16 47 | ♌ 29 51 0 | 1 18 0 | ♌ 29 51 22 | 1 17 32 | +0 22 | −0 28 |
| *Dec.* 12 | 4 46 | ♍ 6 32 30 | 8 28 0 | ♍ 6 31 20 | 8 29 6 | −1 10 | +1 6 |
| 21 | 6 37 | ♎ 5 8 12 | 21 42 13 | ♎ 5 6 14 | 21 44 42 | −1 58 | +2 29 |
| 24 | 6 18 | 18 49 23 | 25 23 5 | 18 47 30 | 25 23 35 | −1 53 | +0 30 |
| 26 | 5 21 | ♎ 28 24 13 | 27 0 52 | ♎ 28 21 42 | 27 2 1 | −2 31 | +1 9 |
| 29 | 8 3 | ♐ 13 10 41 | 28 9 58 | ♐ 13 11 14 | 28 10 38 | +0 33 | +0 40 |
| 30 | 8 10½ | ♐ 17 38 20 | 28 11 53 | ♐ 17 38 27 | 28 11 37 | +0 7 | −0 16 |
| *Jan.* 3 | 7 50 | ♈ 2 53 0 | 27 7 48 | ♈ 2 52 42 | 27 7 48 | −0 18 | |
| 1681. 5 | 6 1½ | 8 48 53 | 26 15 7 | 8 48 51 | 26 14 57 | −0 2 | −0 10 |
| 9 | 7 1 | 18 44 4 | 24 11 56 | 18 43 51 | 24 12 17 | −0 13 | +0 21 |
| 10 | 6 6 | 20 40 50 | 23 43 32 | 20 40 23 | 23 43 25 | −0 27 | −0 7 |
| 13 | 7 9 | ♈ 25 59 48 | 22 17 28 | ♈ 26 0 8 | 22 16 32 | +0 20 | −0 56 |
| 25 | 7 59 | ♉ 9 35 0 | 17 56 30 | ♉ 9 34 11 | 17 56 6 | −0 49 | −0 24 |
| 26 | 6 50 | 10 19 0 | 17 40 30 | 10 20 14 | 17 40 29 | +1 14 | |
| *Jan.* 30 | 8 22 | 13 19 51 | 16 42 18 | 13 18 28 | 16 40 5 | −1 23 | −2 13 |
| *Feb.* 2 | 6 35 | 15 13 53 | 16 4 1 | 15 11 59 | 16 2 7 | −1 54 | −1 54 |
| 5 | 7 4½ | 16 59 6 | 15 27 3 | 16 59 17 | 15 27 0 | +0 11 | −0 3 |
| *Mart.* 1 | 11 10 | ♉ 27 52 40 | 12 23 40 | ♉ 27 51 47 | 12 22 38 | −0 53 | −1 2 |
| 9 | 8 38 | ♊ 0 43 4 | 11 45 52 | ♊ 0 42 43 | 11 45 35 | −0 21 | −0 17 |

Experiantur itaq; *Vorticum* & *Pleni abſoluti* fautores, an juxta Hypotheſes ſuas poterint hujus Cometæ, per novem integra Signa ac ſpatium pluſquam quadrimeſtre viſi, curſum repræſentare; & an alia Curva, aliave in eâ motûs Lex à noſtrâ ſenſibiliter diverſa, ſingularem Viæ ejus Curvaturam, ac Velocitates diverſimodè auctas ac minutas pari certitudine poterit exhibere.

Si

Si hoc fieri nequeat, discant tandem missis nugis Veritatis studio indulgere, & cum *Regali Societate* nostrâ *Nullius in verba* jurare.

Cæterum hic Cometa, in ea Orbitæ suæ parte qua versus Solem descendit, ita Planetarum omnium semitis propinquus accessit, ut si forte transeuntem cuilibet è Planetis occurrere contigisset, fieri non potuit quin producerentur effectus valde sensibiles, motus quæ Cometæ maximas patiretur interturbationes. Hoc in casu multum immutari potuit Planum Speciesq; Ellipseos, Tempusq; Periodicum, præsertim ex occursu *Jovis*. In descensu nupero, Via vera Cometæ hujus parvo intervallo *Saturni* & *Jovis* Orbitas infra se reliquit ad Austrum: *Veneris* & *Mercurii* semitis multo propius accessit, *Martis* vero adhuc vicinior. Dum autem per Planum Eclipticæ transiit, ad Nodum sc. Austrinum, ita Terræ semitam appropinquavit, ut si diebus triginta uno serius Solem accessisset, vix semidiametro Solari Globum nostrum versus Boream reliquisset: Et proculdubio Vi Centripetâ ejus (quam cum magno *Newtono* Moli seu quantitati Materiæ in Cometa contentæ proportionalem supponimus) diversitatem aliquam in situ & Specie Orbis Terræ, Spatiiq; annui quantitate intulisset. Collisionem vero vel contactum tantorum Corporum ac tantâ vi motorum (quod quidem manifestum est minimè impossibile esse) avortat DEUS. O. M. ne pereat funditus pulcherrimus hic rerum ordo & in Chaos antiquum redigatur. Sed hæc obiter.

Cum autem plusquam probabile sit cæteros Cometas in Catalogo nostro descriptos post absolutas Periodos suas iterum reversuros esse, unde datis temporibus Periodicis darentur etiam Orbitarum Ellipticarum Axes, ac proinde Species; ut Astronomis posteris Calculi operosi tædium pro posse sublevarem, adjicere placuit Tabulam sequentem, qua continentur Segmentorum Areæ duplæ, Sinuum Rectorum & Versorum Logarithmi cum eorundem differentiis, ipsiq; Sinus Versi, ad quintas graduum Anomaliæ Eccentri pares collecti. Jam si fiat ut Semiaxis major Ellipseos ad distantiam Periheliam, ita 1 ad quartam proportionalem, & hujus quartæ Logarithmo addantur Logarithmi Sinuum rectorum in Tabulâ sigillatim, vel eorundem differentias additione continuâ, habebuntur duplæ Areæ Triangulorum duplis Segmentis in secunda Columnâ inventis addendæ, pro Medio Motu ad Anomalias Eccentri respectivè. Dein addantur pari modo Logarithmi Sinuum Versorum Logarithmo Eccentricitatis datæ, ac per totam seriem numerorum his summis competentium addatur ubiq; distantia Perihelia, & emerget Tabula verarum Cometæ à Sole distantiarum. Deniq; erit in omni casu ut distantia Cometæ à Sole ad Axem Orbitæ minorem, ita Sinus Anomaliæ Eccentri ad Sinum anguli ab Focum Ellipseos.

*TABULA*

# TABULA GENERALIS PRO EXPEDIENDO CALCULO MOTUS COMETICI IN ELLIPSIBUS.

| Anom. Eccentri. | Dupla Area Segmenti. | Anom. Eccentri Sinus Logarith. | Differentia Sinuum Logar. | Anom. Eccentri Sinus Verſus Log. | Differentia Sinuum Verſor7 Log. | Anom. Eccent. Sinus Verſus Naturalis. |
|---|---|---|---|---|---|---|
| ° ′ | | | | | | |
| 0 0 | 0,00000,000 | 0,000000 | | 0,000000 | | 0,0000000 |
| 12 | 0,00000,001 | 7,542906 | 301028 | 4,784784 | 602059 | 0,0000061 |
| 24 | 0,00000,006 | 7,843934 | 176087 | 5,386843 | 352180 | 0,0000244 |
| 36 | 0,00000,019 | 8,020021 | 124932 | 5,739023 | 249875 | 0,0000548 |
| 48 | 0,00000,045 | 8,144953 | 96902 | 5,988898 | 193816 | 0,0000975 |
| 1 0 | 0,00000,089 | 8,241855 | 79172 | 6,182714 | 158357 | 0,0001523 |
| 12 | 0,00000,153 | 8,321027 | 66935 | 6,341071 | 133888 | 0,0002194 |
| 24 | 0,00000,243 | 8,387962 | 57979 | 6,474959 | 115977 | 0,0002986 |
| 36 | 0,00000,363 | 8,445941 | 51137 | 6,590936 | 102298 | 0 0003899 |
| 48 | 0,00000,517 | 8,497078 | 45741 | 6,693234 | 91507 | 0,0004934 |
| 2 0 | 0,00000,709 | 8,542819 | 41374 | 6,784741 | 82776 | 0,0006092 |
| 12 | 0,00000,943 | 8,584193 | 37769 | 6,867517 | 75567 | 0,0007371 |
| 24 | 0,00001,225 | 8,621962 | 34740 | 6,943084 | 69513 | 0,0008772 |
| 36 | 0,00001,557 | 8,656702 | 32160 | 7,012597 | 64357 | 0,0010294 |
| 48 | 0,00001,945 | 8,688862 | 29938 | 7,076954 | 59914 | 0,0011939 |
| 3 0 | 0,00002,392 | 8,718800 | 28001 | 7,136868 | 56044 | 0,0013705 |
| 12 | 0,00002,903 | 8 746801 | 26300 | 7,192912 | 52643 | 0,0015592 |
| 24 | 0,00003,482 | 8,773101 | 24793 | 7,245555 | 49632 | 0,0017601 |
| 36 | 0,00004,133 | 8,797894 | 23448 | 7,295187 | 46946 | 0,0019732 |
| 48 | 0,00004,861 | 8,821342 | 22242 | 7,342133 | 44535 | 0,0021985 |
| 4 0 | 0,00005,670 | 8,843584 | 21154 | 7,386668 | 42361 | 0,0024360 |
| 12 | 0,00006,563 | 8,864738 | 20165 | 7,429029 | 40388 | 0,0026855 |
| 24 | 0,00007,546 | 8,884903 | 19265 | 7,469417 | 38590 | 0,0029472 |
| 36 | 0,00008,622 | 8,904168 | 18442 | 7,508007 | 36946 | 0,0032211 |
| 48 | 0,00009,796 | 8,922610 | 17686 | 7,544953 | 35436 | 0,0035071 |
| 5 0 | 0,00011,072 | 8,940296 | 16988 | 7,580389 | 34044 | 0,0038053 |
| 12 | 0,00012,454 | 8,957284 | 16344 | 7,614433 | 32758 | 0,0041156 |
| 24 | 0,00013,947 | 8,973628 | 15746 | 7,647191 | 31564 | 0,0044380 |
| 36 | 0,00015,534 | 8,989374 | 15189 | 7,678755 | 30455 | 0,0047726 |
| 48 | 0,00017,280 | 9,004563 | 14672 | 7,709210 | 29420 | 0,0051193 |
| 6 0 | 0,00019,129 | 9,019235 | | 7,738630 | | 0,0054781 |

# TABULA GENERALIS PRO EXPEDIENDO CALCULO MOTUS COMETICI IN ELLIPSIBUS.

| Anom. Eccentri. | Dupla Area Segmenti. | Anom. Eccentri Sinus Logarith. | Diff. Sinuum Logar. | Anom. Eccentri Sinus Verſus Log. | Diff. Sinuum Verſor. Logar. | Anom. Eccent. Sinus Verſus Naturalis. |
|---|---|---|---|---|---|---|
| ° ′ | | | | | | |
| 6 0 | 0,00019129 | 9,019235 | | 7,738630 | | 0,0054781 |
| | | | 14186 | | 28454 | |
| 12 | 0,00021106 | 9,033421 | | 7,767084 | | 0,0058491 |
| | | | 13733 | | 27549 | |
| 24 | 0,00023214 | 9,047154 | | 7,794633 | | 0,0062320 |
| | | | 13306 | | 26699 | |
| 36 | 0,00025458 | 9,060460 | | 7,821332 | | 0,0066272 |
| | | | 12906 | | 25901 | |
| 48 | 0,00027842 | 9,073366 | | 7,847233 | | 0,0070344 |
| | | | 12528 | | 25148 | |
| 7 0 | 0,00030370 | 9,085894 | | 7,872381 | | 0,0074539 |
| | | | 12172 | | 24437 | |
| 12 | 0,00033047 | 9,098066 | | 7,896818 | | 0,0078853 |
| | | | 11835 | | 23766 | |
| 24 | 0,00035877 | 9,109901 | | 7,920584 | | 0,0083288 |
| | | | 11516 | | 23131 | |
| 36 | 0,00038863 | 9,121417 | | 7,943715 | | 0,0087844 |
| | | | 11213 | | 22528 | |
| 48 | 0,00042011 | 9,132630 | | 7,966243 | | 0,0092521 |
| | | | 10925 | | 21956 | |
| 8 0 | 0,00045324 | 9,143555 | | 7,988199 | | 0,0097319 |
| | | | 10653 | | 21412 | |
| 12 | 0,00048806 | 9,154208 | | 8,009611 | | 0,0102238 |
| | | | 10392 | | 20894 | |
| 24 | 0,00052463 | 9,164600 | | 8,030505 | | 0,0107277 |
| | | | 10144 | | 20401 | |
| 36 | 0,00056297 | 9,174744 | | 8,050906 | | 0,0112436 |
| | | | 9907 | | 19930 | |
| 48 | 0,00060314 | 9,184651 | | 8,070836 | | 0,0117717 |
| | | | 9681 | | 19481 | |
| 9 0 | 0,00064517 | 9,194332 | | 8,090317 | | 0,0123117 |
| | | | 9465 | | 19050 | |
| 12 | 0,00068910 | 9,203797 | | 8,109367 | | 0,0128638 |
| | | | 9258 | | 18639 | |
| 24 | 0,00073499 | 9,213055 | | 8,128006 | | 0,0134278 |
| | | | 9060 | | 18245 | |
| 36 | 0,00078286 | 9,222115 | | 8,146251 | | 0,0140039 |
| | | | 8869 | | 17867 | |
| 48 | 0,00083277 | 9,230984 | | 8,164118 | | 0,0145921 |
| | | | 8686 | | 17504 | |
| 10 0 | 0,00088475 | 9,239670 | | 8,181622 | | 0,0151922 |
| | | | 8511 | | 17156 | |
| 12 | 0,00093884 | 9,248181 | | 8,198778 | | 0,0158044 |
| | | | 8342 | | 16821 | |
| 24 | 0,00099510 | 9,256523 | | 8,215599 | | 0,0164286 |
| | | | 8180 | | 16498 | |
| 36 | 0,00105355 | 9,264703 | | 8,232097 | | 0,0170646 |
| | | | 8023 | | 16189 | |
| 48 | 0,00111424 | 9,272726 | | 8,248286 | | 0,0177128 |
| | | | 7873 | | 15890 | |
| 11 0 | 0,00117722 | 9,280599 | | 8,264176 | | 0,0183728 |
| | | | 7727 | | 15601 | |
| 12 | 0,00124252 | 9,288326 | | 8,279777 | | 0,0190449 |
| | | | 7587 | | 15324 | |
| 24 | 0,00131019 | 9,295913 | | 8,295101 | | 0,0197288 |
| | | | 7451 | | 15056 | |
| 36 | 0,00138027 | 9,303364 | | 8,310157 | | 0,0204247 |
| | | | 7321 | | 14796 | |
| 48 | 0,00145280 | 9,310685 | | 8,324953 | | 0,0211326 |
| | | | 7194 | | 14546 | |
| 12 0 | 0,00152782 | 9,317879 | | 8,339499 | | 0,0218524 |

# TABULA GENERALIS PRO EXPEDIENDO CALCULO MOTUS COMETICI IN ELLIPSIBUS

| Anom. Eccentri. | Dupla Area Segmenti. | Anom. Eccentri Sinus Logarith. | Diff. Sinuum Logar. | Anom. Eccentri Sinus Versus Log. | Diff. Sinuum Versor⁷ Logar. | Anom. Eccent. Sinus Versus Naturalis. |
|---|---|---|---|---|---|---|
| ° ′ | | | | | | |
| 12 0 | 0,00152782 | 9,3117879 | | | | 0,0218524 |
| | | | 7071 | 8,339499 | 14304 | |
| 12 | 0,00160537 | 9,3249500 | | 8,353803 | | 0,0225841 |
| | | | 6953 | | 14069 | |
| 24 | 0,00168550 | 9,3319903 | | 8,367872 | | 0,0233277 |
| | | | 6839 | | 13842 | |
| 36 | 0,00176824 | 9,3387742 | | 8,381715 | | 0,0240832 |
| | | | 6727 | | 13623 | |
| 48 | 0,00185365 | 9,3454690 | | 8,395338 | | 0,0248506 |
| | | | 6619 | | 13410 | |
| 13 0 | 0,00194175 | 9,3520880 | | 8,408747 | | 0,0256300 |
| | | | 6515 | | 13204 | |
| 12 | 0,00203259 | 9,3586030 | | 8,421951 | | 0,0264211 |
| | | | 6413 | | 13003 | |
| 24 | 0,00212622 | 9,3650160 | | 8,434954 | | 0,0272240 |
| | | | 6314 | | 12808 | |
| 36 | 0,00222267 | 9,3713300 | | 8,447762 | | 0,0280390 |
| | | | 6219 | | 12620 | |
| 48 | 0,00232198 | 9,3775490 | | 8,460382 | | 0,0288657 |
| | | | 6126 | | 12437 | |
| 14 0 | 0,00242420 | 9,3836750 | | 8,472819 | | 0,0297043 |
| | | | 6036 | | 12258 | |
| 12 | 0,00252937 | 9,3897110 | | 8,485077 | | 0,0305546 |
| | | | 5947 | | 12085 | |
| 24 | 0,00263752 | 9,3956580 | | 8,497162 | | 0,0314168 |
| | | | 5862 | | 11917 | |
| 36 | 0,00274871 | 9,4015200 | | 8,509079 | | 0,0322909 |
| | | | 5779 | | 11753 | |
| 48 | 0,00286297 | 9,4072990 | | 8,520832 | | 0,0331767 |
| | | | 5697 | | 11593 | |
| 15 0 | 0,00298034 | 9,4129960 | | 8,532425 | | 0,0340742 |
| | | | 5619 | | 11438 | |
| 12 | 0,00310087 | 9,4186150 | | 8,543863 | | 0,0349835 |
| | | | 5541 | | 11287 | |
| 24 | 0,00322459 | 9,4241560 | | 8,555150 | | 0,0359045 |
| | | | 5467 | | 11139 | |
| 36 | 0,00335154 | 9,4296230 | | 8,566289 | | 0,0368374 |
| | | | 5393 | | 10996 | |
| 48 | 0,00348177 | 9,4350160 | | 8,577285 | | 0,0377821 |
| | | | 5322 | | 10856 | |
| 16 0 | 0,00361532 | 9,4403380 | | 8,588141 | | 0,0387383 |
| | | | 5252 | | 10719 | |
| 12 | 0,00375223 | 9,4455900 | | 8,598860 | | 0,0397062 |
| | | | 5185 | | 10585 | |
| 24 | 0,00389254 | 9,4507750 | | 8,609445 | | 0,0406860 |
| | | | 5118 | | 10456 | |
| 36 | 0,00403629 | 9,4558930 | | 8,619901 | | 0,0416774 |
| | | | 5053 | | 10328 | |
| 48 | 0,00418352 | 9,4609460 | | 8,630229 | | 0,0426804 |
| | | | 4989 | | 10205 | |
| 17 0 | 0,00433427 | 9,4659350 | | 8,640434 | | 0,0436952 |
| | | | 4928 | | 10084 | |
| 12 | 0,00448858 | 9,4708630 | | 8,650518 | | 0,0447216 |
| | | | 4867 | | 9965 | |
| 24 | 0,00464650 | 9,4757300 | | 8,660483 | | 0,0457597 |
| | | | 4808 | | 9849 | |
| 36 | 0,00480806 | 9,4805380 | | 8,670332 | | 0,0468093 |
| | | | 4751 | | 9737 | |
| 48 | 0,00497330 | 9,4852890 | | 8,680069 | | 0,0478706 |
| | | | 4693 | | 9626 | |
| 18 0 | 0,00514227 | 9,4899820 | | 8,689695 | | 0,0489435 |

# TABULA PARTIUM DIEI DECIMALIUM.

| Hor. | Decimales partes. | Min. | Decimales partes. | Min. | Decimales partes. | Sec. | Decimales partes. |
|---|---|---|---|---|---|---|---|
| 1 | 0,04166 .. | 1 | ,000694 .. | 31 | ,021527 .. | 1 | ,000011574 |
| 2 | 0,08333 .. | 2 | ,001388 .. | 32 | ,022222 .. | 2 | ,000023148 |
| 3 | 0,12500 | 3 | ,002083 .. | 33 | ,022916 .. | 3 | ,000034722 .. |
| 4 | 0,16666 .. | 4 | ,002777 .. | 34 | ,023611 .. | 4 | ,000046296 |
| 5 | 0,20833 .. | 5 | ,003472 .. | 35 | ,024305 .. | 5 | ,000057870 |
| 6 | 0,25000 | 6 | ,004166 .. | 36 | ,025000 | 6 | ,000069444 .. |
| 7 | 0,29166 .. | 7 | ,004861 .. | 37 | ,025694 .. | 7 | ,000081019 |
| 8 | 0,33333 .. | 8 | ,005555 .. | 38 | ,026388 .. | 8 | ,000092593 |
| 9 | 0,37500 | 9 | ,006250 | 39 | ,027083 .. | 9 | ,000104166 .. |
| 10 | 0,41666 .. | 10 | ,006944 .. | 40 | ,027777 .. | 10 | ,000115741 |
| 11 | 0,45833 .. | 11 | ,007638 .. | 41 | ,028472 .. | 20 | ,000231482 |
| 12 | 0,50000 | 12 | ,008333 .. | 42 | ,029166 .. | 30 | ,000347222 .. |
| 13 | 0,54166 .. | 13 | ,009027 .. | 43 | ,029861 .. | 40 | ,000462963 |
| 14 | 0,58333 .. | 14 | ,009722 .. | 44 | ,030555 .. | 50 | ,000578704 |
| 15 | 0,62500 | 15 | ,010416 .. | 45 | ,031250 | 60 | ,000694444 .. |
| 16 | 0,66666 .. | 16 | ,011111 .. | 46 | ,031944 .. | *Abacus pro longitudine Arcuum Circularium ad Radium 1.* | |
| 17 | 0,70833 .. | 17 | ,011805 .. | 47 | ,032638 .. | | |
| 18 | 0,75000 | 18 | ,012500 | 48 | ,033333 .. | | |
| 19 | 0,79166 .. | 19 | ,013194 .. | 49 | ,034027 .. | | |
| 20 | 0,83333 .. | 20 | ,013888 .. | 50 | ,034722 .. | Gr. | *Arcuum Longit.* |
| 21 | 0,87500 | 21 | ,014583 .. | 51 | ,035416 .. | 1 | ,0174532925 |
| 22 | 0,91666 .. | 22 | ,015277 .. | 52 | ,036111 .. | 2 | ,0349065850 |
| 23 | 0,95833 .. | 23 | ,015972 .. | 53 | ,036805 .. | 3 | ,0523598776 |
| 24 | 1,00000 | 24 | ,016666 .. | 54 | ,037500 .. | 4 | ,0698131701 |
| 25 | 1,04166 .. | 25 | ,017361 .. | 55 | ,038194 .. | 5 | ,0872664626 |
| 26 | 1,08333 .. | 26 | ,018055 .. | 56 | ,038888 .. | 6 | ,1047197551 |
| 27 | 1,12500 | 27 | ,018750 | 57 | ,039583 .. | 7 | ,1221730477 |
| 28 | 1,16666 .. | 28 | ,019444 .. | 58 | ,040277 .. | 8 | ,1396263402 |
| 29 | 1,20833 .. | 29 | ,020138 .. | 59 | ,040972 .. | 9 | ,1570796327 |
| 30 | 1,25000 | 30 | ,020833 .. | 60 | ,041666 .. | 10 | ,1745329252 |

*Decimales Numeri hac Notâ ( .. ) terminati continuantur in infinitum repetitione Cyphræ ultimæ.*

# *Catalogus præcipuarum Fixarum, ad Annum* MDCCXX *inceuntem.*

| *Stellarum Denominatio.* | *Longitudo.* | | | *Latitudo.* | | | | *Mag.* |
|---|---|---|---|---|---|---|---|---|
| | ° | ′ | ″ | ° | ′ | ″ | | |
| Extrema alæ Pegaſi | ♈ 5 | 14 | 50 | 12 | 35 | 12 | B | 2 |
| Caput Andromedæ | ♈ 10 | 23 | 53 | 25 | 41 | 1 | B | 2 |
| Borea in ventre Ceti | ♈ 18 | 1 | 47 | 20 | 21 | 19 | A | 3 |
| Nodus lini Piſcium | ♈ 25 | 27 | 33 | 9 | 5 | 10 | A | 3 |
| Clara Cinguli Andromedæ | ♈ 26 | 27 | 44 | 25 | 56 | 19 | B | 2 |
| Auſtralis in Cornu Arietis. 1ma ✱ ♈. | ♈ 29 | 16 | 0 | 7 | 8 | 58 | B | 4 |
| Borea in eodem Cornu | ♉ 0 | 3 | 0 | 8 | 28 | 16 | B | 3 |
| Lucida Cathedræ Caſſiopeiæ | ♉ 1 | 13 | 7 | 51 | 13 | 50 | B | 2 |
| Lucida Arietis, ſupra verticem | ♉ 3 | 44 | 18 | 9 | 57 | 12 | B | 2 |
| In pectore Caſſiopeiæ. *Schedir.* | ♉ 3 | 55 | 21 | 46 | 35 | 54 | B | 2 |
| In flexura ad coxas Caſſiopeiæ | ♉ 10 | 3 | 44 | 48 | 47 | 35 | B | 2 |
| Pes Auſtralis Andromedæ | ♉ 10 | 20 | 44 | 27 | 46 | 7 | B | 2 |
| Lucida Mandibulæ Ceti | ♉ 10 | 24 | 15 | 12 | 37 | 0 | A | 2 |
| Genu Caſſiopeiæ | ♉ 14 | 2 | 15 | 46 | 23 | 26 | B | 3 |
| Caput Meduſæ, *Algol* | ♉ 22 | 15 | 42 | 22 | 23 | 47 | B | 2 |
| Lucida Pleiadum | ♉ 26 | 5 | 8 | 4 | 0 | 37 | B | 3 |
| Lucida in latere Perſei | ♉ 28 | 11 | 4 | 30 | 5 | 20 | B | 2 |
| Prima Hyadum, in naribus Tauri | ♊ 1 | 52 | 34 | 5 | 46 | 22 | A | 3 |
| Oculus Boreus Tauri | ♊ 4 | 32 | 11 | 2 | 35 | 58 | A | 3 |
| Oculus ejus Auſtrinus, *Aldebaran* | ♊ 5 | 52 | 0 | 5 | 29 | 50 | A | 1 |
| Orionis pes lucidus, *Rigel* | ♊ 12 | 55 | 0 | 31 | 10 | 11 | A | 1 |
| Præcedens humerus Orionis | ♊ 17 | 2 | 33 | 16 | 51 | 30 | A | 2 |
| Capella, *Hircus* | ♊ 17 | 56 | 41 | 22 | 51 | 47 | B | 1 |
| Præcedens Clararum in Columba | ♊ 18 | 16 | 38 | 57 | 24 | 15 | A | 2 |
| Prima Balthei Orionis | ♊ 18 | 26 | 38 | 23 | 36 | 7 | A | 2 |
| Cornu Boreum Tauri | ♊ 18 | 38 | 56 | 5 | 21 | 34 | B | 2 |
| Media in Cingulo Orionis | ♊ 19 | 32 | 44 | 24 | 33 | 23 | A | 2 |
| Sequens in Cingulo Orionis | ♊ 20 | 46 | 45 | 25 | 20 | 17 | A | 2 |
| In extremitate Cornu Auſtralis Tauri | ♊ 20 | 52 | 55 | 2 | 14 | 24 | A | 3 |
| Sequens clararum in Columba | ♊ 22 | 31 | 5 | 59 | 15 | 8 | A | 2 |
| Ultima Caudæ Urſæ minoris, *Polaris* | ♊ 24 | 39 | 41 | 66 | 4 | 11 | B | 2 |
| Sequens humerus Orionis | ♊ 24 | 50 | 0 | 16 | 4 | 26 | A | 1 |
| Sequens humerus Aurigæ | ♊ 26 | 0 | 32 | 21 | 28 | 20 | B | 2 |
| Præcedentis è Geminis pes prior | ♊ 29 | 31 | 43 | 0 | 56 | 0 | A | 3 |
| Sequens in eodem pede, *Calx* | ♋ 1 | 23 | 10 | 0 | 51 | 22 | A | 3 |

# *Catalogus præcipuarum Fixarum, ad Annum* MDCCXX *ineuntem.*

| *Stellarum Denominatio.* | *Longitudo.* | | | *Latitudo.* | | | | *Mag.* |
|---|---|---|---|---|---|---|---|---|
| | ° | ′ | ″ | ° | ′ | ″ | | |
| In extremo pede priore Canis majoris | ♋ 3 | 17 | 58 | 41 | 17 | 47 | A | 2 |
| Sequentis è Geminis Pes lucidus | ♋ 5 | 11 | 18 | 6 | 47 | 19 | A | 2 |
| In Ore Canis majoris, *Sirius* | ♋ 10 | 14 | 0 | 39 | 32 | 8 | A | 1 |
| In Genu sequentis è Geminis | ♋ 11 | 4 | 40 | 2 | 5 | 27 | A | 3 |
| In Gubernaculo Argûs Navis, *Canopus* | ♋ 11 | 9 | 0 | 75 | 51 | 0 | A | 1 |
| In inguine sequentis è Geminis | ♋ 14 | 36 | 20 | 0 | 13 | 7 | A | 3 |
| Caput præcedentis è Geminis, *Castor* | ♋ 16 | 20 | 20 | 10 | 3 | 48 | B | 2 |
| Inter femora Canis Majoris | ♋ 16 | 55 | 0 | 51 | 22 | 48 | A | 2 |
| Caput sequentis è Geminis, *Pollux* | ♋ 19 | 21 | 9 | 6 | 39 | 27 | B | 2 |
| In ventre Canis majoris | ♋ 19 | 32 | 5 | 48 | 27 | 33 | A | 2 |
| Canis minor, *Procyon* | ♋ 21 | 55 | 21 | 15 | 57 | 55 | A | 1 |
| In Cauda Canis majoris | ♋ 25 | 40 | 27 | 50 | 37 | 41 | A | 2 |
| Asellus Boreus | ♌ 3 | 38 | 0 | 3 | 9 | 41 | B | 4 |
| Asellus Australis | ♌ 4 | 48 | 40 | 0 | 3 | 46 | B | 4 |
| Borea præcedentium in □ Ursæ majoris | ♌ 11 | 15 | 0 | 49 | 40 | 5 | B | 2 |
| Clara in Tabulato Navis Argûs | ♌ 14 | 41 | 24 | 58 | 21 | 6 | A | 2 |
| Australis præcedentium in □ Ursæ majoris | ♌ 15 | 29 | 12 | 45 | 6 | 16 | B | 2 |
| In Capite Leonis Australior | ♌ 16 | 47 | 16 | 9 | 41 | 4 | B | 3 |
| Cor Hydræ | ♌ 23 | 23 | 0 | 22 | 24 | 32 | A | 2 |
| Sub Tabulato Navis | ♌ 23 | 29 | 0 | 64 | 27 | 32 | A | 2 |
| Trium in Collo Leonis Borea | ♌ 23 | 38 | 41 | 11 | 50 | 13 | B | 3 |
| Australis Colli Leonis | ♌ 23 | 59 | 24 | 4 | 50 | 20 | B | 3 |
| Media & Lucida Colli Leonis | ♌ 25 | 40 | 5 | 8 | 47 | 27 | B | 2 |
| Cor Leonis, *Regulus* | ♌ 25 | 56 | 20 | 0 | 26 | 38 | B | 1 |
| Inferior sequentium in □ Ursæ majoris | ♌ 26 | 31 | 35 | 47 | 7 | 26 | B | 2 |
| Borea earundem | ♌ 27 | 5 | 40 | 51 | 39 | 36 | B | 3 |
| Antepenultima Caudæ Draconis | ♍ 3 | 28 | 11 | 66 | 21 | 43 | B | 3 |
| In Eductione Caudæ Ursæ majoris | ♍ 4 | 56 | 25 | 54 | 20 | 16 | B | 2 |
| In Sectione Tabulati Navis | ♍ 7 | 17 | 0 | 55 | 52 | 30 | A | 2 |
| Lucida in Lumbis Leonis | ♍ 7 | 22 | 21 | 14 | 19 | 4 | B | 2 |
| Australis in Clune Leonis | ♍ 9 | 30 | 31 | 9 | 39 | 50 | B | 3 |
| Penultima Caudæ Ursæ majoris | ♍ 11 | 44 | 0 | 56 | 23 | 15 | B | 2 |
| Australis in Femore Leonis | ♍ 13 | 38 | 0 | 6 | 5 | 10 | B | 3 |
| In Sectione Carinæ Argûs | ♍ 15 | 2 | 12 | 67 | 11 | 11 | A | 2 |
| Cauda Leonis | ♍ 17 | 44 | 14 | 12 | 16 | 51 | B | 1 |

# *Catalogus præcipuarum Fixarum, ad Annum* MDCCXX *ineuntem.*

| *Stellarum Denominatio.* | *Longitudo.* ° | ′ | ″ | *Latitudo.* ° | ′ | ″ | | *Mag.* |
|---|---|---|---|---|---|---|---|---|
| Lucida in inferiore Carinâ Navis | ♍19 | 17 | 10 | 72 | 39 | 32 | A | 2 |
| Clara informis inter Caudas Urſæ & Leonis | ♍20 | 39 | 22 | 40 | 7 | 53 | B | 2 |
| Ultima Caudæ Urſæ majoris | ♍22 | 59 | 24 | 54 | 24 | 0 | B | 2 |
| In ancone alæ Auſtrinæ Virginis | ♍23 | 11 | 14 | 0 | 40 | 47 | B | 3 |
| Sectionem Carinæ Navis ſequentium Borea | ♍24 | 59 | 30 | 63 | 42 | 23 | A | 3 |
| Præcedens in ala Auſtrina Virginis | ♎ 0 | 55 | 52 | 1 | 22 | 1 | B | 3 |
| Sectionem Carinæ ſequentium Auſtralis | ♎ 1 | 28 | 30 | 67 | 5 | 20 | A | 2 |
| In ala Borea Virginis, *Vindemiatrix* | ♎ 6 | 2 | 40 | 16 | 12 | 54 | B | 3 |
| Secunda Alæ Auſtrinæ Virginis | ♎ 6 | 17 | 11 | 2 | 48 | 53 | B | 3 |
| Sub Cingulo Virginis in latere | ♎ 7 | 34 | 54 | 8 | 38 | 27 | B | 3 |
| In humero præcedente Bootæ | ♎13 | 43 | 18 | 49 | 33 | 0 | B | 3 |
| Spica Virginis | ♎19 | 56 | 22 | 2 | 2 | 0 | A | 1 |
| Clara inter femora Bootæ, *Arcturus* | ♎20 | 18 | 52 | 30 | 57 | 0 | B | 1 |
| Ad Radicem Roboris Carolini | ♎28 | 5 | 5 | 72 | 13 | 6 | A | 2 |
| Lucida in lumbis Centauri | ♎28 | 26 | 56 | 40 | 7 | 20 | A | 2 |
| Genu poſter. præced. Centauri, *Bor. Crucis* | ♏ 2 | 51 | 9 | 47 | 45 | 51 | A | 2 |
| In talo pedis ejuſdem, *Sequens Crucis* | ♏ 7 | 46 | 12 | 48 | 35 | 3 | A | 2 |
| In imo pede poſter. ſeq. Centauri, *Pes Crucis* | ♏ 8 | 0 | 5 | 52 | 49 | 15 | A | 2 |
| Lucida Coronæ Boreæ | ♏ 8 | 20 | 56 | 44 | 21 | 17 | B | 2 |
| Lanx Auſtrina Libræ | ♏11 | 11 | 40 | 0 | 22 | 51 | B | 2 |
| Lucida in alvo Centauri | ♏11 | 38 | 20 | 39 | 32 | 0 | A | 2 |
| Lanx Borea Libræ | ♏15 | 27 | 40 | 8 | 31 | 45 | B | 2 |
| Lucida colli Serpentis Ophiuchi | ♏18 | 8 | 22 | 25 | 31 | 56 | B | 2 |
| In Genu ſiniſtro priore Centauri | ♏19 | 54 | 30 | 44 | 4 | 47 | A | 2 |
| In pede dextro priore ejuſdem | ♏26 | 1 | 16 | 42 | 27 | 48 | A | 1 |
| Clarior in ſiniſtrâ manu Ophiuchi, *Ted.* | ♏28 | 23 | 15 | 17 | 17 | 15 | B | 3 |
| Media trium in fronte Scorpii | ♏28 | 40 | 50 | 1 | 56 | 31 | A | 2 |
| Auſtralis earundem | ♏29 | 2 | 25 | 5 | 25 | 46 | A | 3 |
| Borea frontis Scorpii | ♏29 | 17 | 56 | 1 | 3 | 9 | B | 2 |
| Genu præcedens Ophiuchi | ♐ 5 | 18 | 55 | 11 | 25 | 27 | B | 3 |
| Cor Scorpii, *Antares* | ♐ 5 | 51 | 4 | 4 | 31 | 26 | A | 1 |
| Caput Herculis | ♐12 | 13 | 47 | 37 | 18 | 55 | B | 3 |
| Genu ſequens Ophiuchi | ♐14 | 4 | 28 | 7 | 14 | 12 | B | 3 |
| In Culpide Trianguli Auſtralis | ♐16 | 56 | 27 | 46 | 5 | 33 | A | 2 |
| In Planta pedis Ophiuchi | ♐17 | 30 | 2 | 1 | 47 | 38 | A | 3 |

Caput

# *Catalogus præcipuarum Fixarum, ad Annum* MDCCXX *ineuntem.*

| *Stellarum Denominatio.* | *Longitudo.* | | | *Latitudo.* | | | *Mag.* |
|---|---|---|---|---|---|---|---|
| | ° | ′ | ″ | ° | ′ | ″ | |
| Caput Ophiuchi | ♐ 18 | 30 | 32 | 35 | 53 | 16 B | 3 |
| Aculeus Caudæ Scorpii | ♐ 20 | 40 | 0 | 13 | 43 | 25 A | 2 |
| Humerus sequens Ophiuchi | ♐ 21 | 25 | 44 | 27 | 58 | 0 B | 3 |
| Spondylus quintus Caudæ Scorpii | ♐ 21 | 40 | 16 | 19 | 36 | 15 A | 2 |
| Lucida in capite Draconis | ♐ 24 | 0 | 35 | 74 | 58 | 26 B | 2 |
| In Australi parte Arcus Sagittarii | ♑ 1 | 10 | 33 | 10 | 59 | 54 A | 2 |
| Humerus sinister Sagittarii | ♑ 8 | 28 | 12 | 3 | 23 | 32 A | 3 |
| Sub Axilla Sagittarii | ♑ 9 | 42 | 22 | 7 | 7 | 55 A | 3 |
| Lucida Lyræ | ♑ 11 | 22 | 18 | 61 | 45 | 31 B | 1 |
| Sequens in Capite Sagittarii | ♑ 12 | 21 | 44 | 1 | 29 | 0 B | 3 |
| Oculus Pavonis | ♑ 19 | 53 | 56 | 36 | 11 | 0 A | 2 |
| Rostrum Cygni | ♑ 27 | 20 | 37 | 49 | 0 | 31 B | 3 |
| Lucida Aquilæ | ♑ 27 | 48 | 24 | 29 | 19 | 11 B | 1 |
| Sequens è contiguis in Cornu Capricorni | ♑ 29 | 57 | 21 | 6 | 58 | 6 B | 3 |
| Australis in eodem Cornu | ♒ 0 | 8 | 57 | 4 | 37 | 27 B | 3 |
| Ala Gruis præcedens | ♒ 11 | 56 | 35 | 32 | 50 | 22 A | 2 |
| Ala Borea Cygni | ♒ 12 | 22 | 17 | 64 | 27 | 14 B | 3 |
| Præcedens duarum in Cauda Capricorni | ♒ 17 | 52 | 42 | 2 | 31 | 18 A | 3 |
| In Eductione Caudæ Gruis | ♒ 18 | 18 | 53 | 35 | 22 | 46 A | 2 |
| Humerus præcedens Aquarii | ♒ 19 | 29 | 23 | 8 | 38 | 43 B | 3 |
| Sequens Caudæ Capricorni | ♒ 19 | 38 | 14 | 2 | 32 | 19 A | 3 |
| Pectus Cygni | ♒ 20 | 57 | 51 | 57 | 9 | 20 B | 3 |
| Ala Australis Cygni | ♒ 23 | 47 | 52 | 49 | 26 | 21 B | 3 |
| Os Pegasi | ♒ 27 | 58 | 32 | 22 | 7 | 16 B | 3 |
| Humerus sequens Aquarii | ♒ 29 | 27 | 16 | 10 | 40 | 38 B | 3 |
| In ore Piscis notii, *Fomalhaut* | ♒ 29 | 54 | 0 | 21 | 4 | 54 A | 1 |
| Cauda Cygni | ♓ 1 | 26 | 32 | 59 | 56 | 37 B | 2 |
| In Crure Aquarii, *Scheat* | ♓ 4 | 58 | 49 | 8 | 11 | 17 A | 3 |
| Caput Hydri | ♓ 7 | 59 | 0 | 64 | 11 | 0 A | 2 |
| In extremo Flumine, *Achernar* | ♓ 11 | 14 | 6 | 59 | 19 | 40 A | 1 |
| Clara in capite Phœnicis | ♓ 11 | 30 | 27 | 40 | 34 | 10 A | 2 |
| In Humero Alæ Pegasi, *Markab* | ♓ 19 | 34 | 13 | 19 | 24 | 37 B | 2 |
| In Crure Pegasi, *Scheat* | ♓ 25 | 27 | 13 | 31 | 8 | 6 B | 2 |
| Borea Caudæ Ceti | ♓ 27 | 0 | 0 | 10 | 0 | 41 A | 3 |
| Australis Caudæ Ceti | ♓ 28 | 38 | 2 | 20 | 46 | 52 A | 2 |

# TABULA
# LOGARITHMORUM
## *LOGISTICORUM.*

# *TABULA LOGARITHMORUM LOGISTICORUM.*

| ′ | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| ″ | 0 | 60 | 120 | 180 | 240 | 300 | 360 | 420 | 480 | 540 |
| 0 | | 17782 | 14771 | 13010 | 11761 | 10792 | 10000 | 9331 | 8751 | 8239 |
| 1 | 35563 | 17710 | 14735 | 12986 | 11743 | 10777 | 9988 | 9320 | 8742 | 8231 |
| 2 | 32553 | 17639 | 14699 | 12962 | 11725 | 10763 | 9976 | 9310 | 8733 | 8223 |
| 3 | 30792 | 17570 | 14664 | 12939 | 11707 | 10749 | 9964 | 9300 | 8724 | 8215 |
| 4 | 29542 | 17501 | 14629 | 12915 | 11689 | 10734 | 9952 | 9289 | 8715 | 8207 |
| 5 | 28573 | 17434 | 14594 | 12891 | 11671 | 10720 | 9940 | 9279 | 8706 | 8199 |
| 6 | 27782 | 17368 | 14559 | 12868 | 11654 | 10706 | 9928 | 9269 | 8697 | 8191 |
| 7 | 27112 | 17302 | 14525 | 12845 | 11636 | 10692 | 9916 | 9259 | 8688 | 8183 |
| 8 | 26532 | 17238 | 14491 | 12821 | 11619 | 10678 | 9905 | 9249 | 8679 | 8175 |
| 9 | 20621 | 17175 | 14457 | 12798 | 11601 | 10663 | 9893 | 9238 | 8670 | 8167 |
| 10 | 25563 | 17112 | 14424 | 12775 | 11584 | 10649 | 9881 | 9228 | 8661 | 8159 |
| 11 | 25149 | 17050 | 14390 | 12753 | 11566 | 10635 | 9869 | 9218 | 8652 | 8152 |
| 12 | 24771 | 16990 | 14357 | 12730 | 11549 | 10621 | 9858 | 9208 | 8643 | 8144 |
| 13 | 24424 | 16930 | 14325 | 12707 | 11532 | 10608 | 9846 | 9198 | 8635 | 8136 |
| 14 | 24102 | 16871 | 14292 | 12685 | 11515 | 10594 | 9834 | 9188 | 8626 | 8128 |
| 15 | 23802 | 16812 | 14260 | 12663 | 11498 | 10580 | 9823 | 9178 | 8617 | 8120 |
| 16 | 23522 | 16755 | 14228 | 12640 | 11481 | 10566 | 9811 | 9168 | 8608 | 8112 |
| 17 | 23259 | 16698 | 14196 | 12618 | 11464 | 10552 | 9800 | 9158 | 8599 | 8104 |
| 18 | 23010 | 16642 | 14165 | 12596 | 11447 | 10539 | 9788 | 9148 | 8591 | 8097 |
| 19 | 22775 | 16587 | 14133 | 12574 | 11430 | 10525 | 9777 | 9138 | 8582 | 8089 |
| 20 | 22553 | 16532 | 14102 | 12553 | 11413 | 10512 | 9765 | 9128 | 8573 | 8081 |
| 21 | 22341 | 16478 | 14071 | 12531 | 11397 | 10498 | 9754 | 9119 | 8565 | 8073 |
| 22 | 22139 | 16425 | 14040 | 12510 | 11380 | 10484 | 9742 | 9109 | 8556 | 8066 |
| 23 | 21946 | 16372 | 14010 | 12488 | 11363 | 10471 | 9731 | 9099 | 8547 | 8058 |
| 24 | 21761 | 16320 | 13979 | 12467 | 11347 | 10458 | 9720 | 9089 | 8539 | 8050 |
| 25 | 21584 | 16269 | 13949 | 12445 | 11331 | 10444 | 9708 | 9079 | 8530 | 8043 |
| 26 | 21413 | 16218 | 13919 | 12424 | 11314 | 10431 | 9697 | 9070 | 8522 | 8035 |
| 27 | 21249 | 16168 | 13890 | 12403 | 11298 | 10418 | 9686 | 9060 | 8513 | 8027 |
| 28 | 21091 | 16118 | 13860 | 12382 | 11282 | 10404 | 9675 | 9050 | 8504 | 8020 |
| 29 | 20939 | 16069 | 13831 | 12362 | 11266 | 10391 | 9664 | 9041 | 8496 | 8012 |
| 30 | 20792 | 16021 | 13802 | 12341 | 11249 | 10378 | 9652 | 9031 | 8487 | 8004 |

# *TABULA LOGARITHMORUM LOGISTICORUM.*

| ′ | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| ″ | 0 | 60 | 120 | 180 | 240 | 300 | 360 | 420 | 480 | 540 |
| 30 | 20792 | 16021 | 13802 | 12341 | 11249 | 10378 | 9652 | 9031 | 8487 | 8004 |
| 31 | 20649 | 15973 | 13773 | 12320 | 11233 | 10365 | 9641 | 9021 | 8479 | 7997 |
| 32 | 20512 | 15925 | 13745 | 12300 | 11217 | 10352 | 9630 | 9012 | 8470 | 7989 |
| 33 | 20378 | 15878 | 13716 | 12279 | 11201 | 10339 | 9619 | 9002 | 8462 | 7981 |
| 34 | 20248 | 15832 | 13688 | 12259 | 11186 | 10326 | 9608 | 8992 | 8453 | 7974 |
| 35 | 20122 | 15786 | 13660 | 12239 | 11170 | 10313 | 9597 | 8983 | 8445 | 7966 |
| 36 | 20000 | 15740 | 13632 | 12218 | 11154 | 10300 | 9586 | 8973 | 8437 | 7959 |
| 37 | 19881 | 15695 | 13604 | 12198 | 11138 | 10287 | 9575 | 8964 | 8428 | 7951 |
| 38 | 19765 | 15651 | 13576 | 12178 | 11123 | 10274 | 9564 | 8954 | 8420 | 7944 |
| 39 | 19652 | 15607 | 13549 | 12159 | 11107 | 10261 | 9553 | 8945 | 8411 | 7936 |
| 40 | 19542 | 15563 | 13522 | 12139 | 11091 | 10248 | 9542 | 8935 | 8403 | 7929 |
| 41 | 19435 | 15520 | 13495 | 12119 | 11076 | 10235 | 9532 | 8926 | 8395 | 7921 |
| 42 | 19331 | 15477 | 13468 | 12099 | 11061 | 10223 | 9521 | 8917 | 8386 | 7914 |
| 43 | 19228 | 15435 | 13441 | 12080 | 11045 | 10210 | 9510 | 8907 | 8378 | 7906 |
| 44 | 19128 | 15393 | 13415 | 12061 | 11030 | 10197 | 9499 | 8898 | 8370 | 7899 |
| 45 | 19031 | 15351 | 13388 | 12041 | 11015 | 10185 | 9488 | 8888 | 8361 | 7891 |
| 46 | 18935 | 15310 | 13362 | 12022 | 10999 | 10172 | 9478 | 8879 | 8353 | 7884 |
| 47 | 18842 | 15269 | 13336 | 12003 | 10984 | 10160 | 9467 | 8870 | 8345 | 7877 |
| 48 | 18751 | 15229 | 13310 | 11984 | 10969 | 10147 | 9456 | 8861 | 8337 | 7869 |
| 49 | 18661 | 15189 | 13284 | 11965 | 10954 | 10135 | 9446 | 8851 | 8328 | 7862 |
| 50 | 18573 | 15149 | 13259 | 11946 | 10939 | 10122 | 9435 | 8842 | 8320 | 7855 |
| 51 | 18487 | 15110 | 13233 | 11927 | 10924 | 10110 | 9425 | 8833 | 8312 | 7847 |
| 52 | 18403 | 15071 | 13208 | 11908 | 10909 | 10098 | 9414 | 8824 | 8304 | 7840 |
| 53 | 18320 | 15032 | 13183 | 11889 | 10894 | 10085 | 9404 | 8814 | 8296 | 7832 |
| 54 | 18239 | 14994 | 13158 | 11871 | 10880 | 10073 | 9393 | 8805 | 8288 | 7825 |
| 55 | 18159 | 14956 | 13133 | 11852 | 10865 | 10061 | 9383 | 8796 | 8279 | 7818 |
| 56 | 18081 | 14918 | 13108 | 11834 | 10850 | 10049 | 9372 | 8787 | 8271 | 7811 |
| 57 | 18004 | 14881 | 13083 | 11816 | 10835 | 10036 | 9362 | 8778 | 8263 | 7803 |
| 58 | 17929 | 14844 | 13059 | 11797 | 10821 | 10024 | 9351 | 8769 | 8255 | 7796 |
| 59 | 17855 | 14808 | 13034 | 11779 | 10806 | 10012 | 9341 | 8760 | 8247 | 7789 |
| 60 | 17782 | 14771 | 13010 | 11761 | 10792 | 10000 | 9331 | 8751 | 8239 | 7782 |

# TABULA LOGARITHMORUM LOGISTICORUM.

| / | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| // | 600 | 660 | 720 | 780 | 840 | 900 | 960 | 1020 | 1080 | 1140 | 1200 | 1260 |
| 0 | 7782 | 7360 | 6990 | 5642 | 6320 | 6021 | 5740 | 5477 | 5229 | 4994 | 4771 | 4559 |
| 1 | 7774 | 7361 | 6984 | 6637 | 6315 | 6016 | 5736 | 5473 | 5225 | 4990 | 4768 | 4556 |
| 2 | 7767 | 7354 | 6978 | 6631 | 6310 | 6011 | 5731 | 5469 | 5221 | 4986 | 4764 | 4552 |
| 3 | 7760 | 7348 | 6972 | 6625 | 6305 | 6006 | 5727 | 5464 | 5217 | 4983 | 4760 | 4549 |
| 4 | 7753 | 7341 | 6966 | 6620 | 6300 | 6001 | 5722 | 5460 | 5213 | 4979 | 4757 | 4546 |
| 5 | 7745 | 7335 | 6960 | 6614 | 6294 | 5997 | 5718 | 5456 | 5209 | 4975 | 4753 | 4542 |
| 6 | 7738 | 7328 | 6954 | 6609 | 6289 | 5992 | 5713 | 5452 | 5205 | 4971 | 4750 | 4539 |
| 7 | 7731 | 7322 | 6948 | 6603 | 6284 | 5987 | 5709 | 5447 | 5201 | 4967 | 4746 | 4535 |
| 8 | 7724 | 7315 | 6942 | 6598 | 6279 | 5982 | 5704 | 5443 | 5197 | 4964 | 4742 | 4532 |
| 9 | 7717 | 7309 | 6936 | 6592 | 6274 | 5977 | 5700 | 5439 | 5193 | 4960 | 4739 | 4528 |
| 10 | 7710 | 7302 | 6930 | 6587 | 6269 | 5973 | 5695 | 5435 | 5189 | 4956 | 4735 | 4525 |
| 11 | 7703 | 7296 | 6924 | 6581 | 6264 | 5968 | 5691 | 5430 | 5185 | 4952 | 4732 | 4522 |
| 12 | 7696 | 7289 | 6918 | 6576 | 6259 | 5963 | 5686 | 5426 | 5181 | 4949 | 4728 | 4518 |
| 13 | 7688 | 7283 | 6912 | 6570 | 6254 | 5958 | 5682 | 5422 | 5177 | 4945 | 4724 | 4515 |
| 14 | 7681 | 7276 | 6906 | 6565 | 6248 | 5954 | 5677 | 5418 | 5173 | 4941 | 4721 | 4511 |
| 15 | 7674 | 7270 | 6900 | 6559 | 6243 | 5949 | 5673 | 5414 | 5169 | 4937 | 4717 | 4508 |
| 16 | 7667 | 7264 | 6894 | 6554 | 6238 | 5944 | 5669 | 5409 | 5165 | 4933 | 4714 | 4505 |
| 17 | 7660 | 7257 | 6888 | 6548 | 6233 | 5939 | 5664 | 5405 | 5161 | 4930 | 4710 | 4501 |
| 18 | 7653 | 7251 | 6882 | 6543 | 6228 | 5935 | 5660 | 5401 | 5157 | 4926 | 4707 | 4498 |
| 19 | 7646 | 7244 | 6877 | 6538 | 6223 | 5930 | 5655 | 5397 | 5153 | 4922 | 4703 | 4494 |
| 20 | 7639 | 7238 | 6871 | 6532 | 6218 | 5925 | 5651 | 5393 | 5149 | 4918 | 4699 | 4491 |
| 21 | 7632 | 7232 | 6865 | 6527 | 6213 | 5920 | 5646 | 5389 | 5145 | 4915 | 4696 | 4488 |
| 22 | 7625 | 7225 | 6859 | 6521 | 6208 | 5916 | 5642 | 5384 | 5141 | 4911 | 4692 | 4484 |
| 23 | 7618 | 7219 | 6853 | 6516 | 6203 | 5911 | 5637 | 5380 | 5137 | 4907 | 4689 | 4481 |
| 24 | 7611 | 7212 | 6847 | 6510 | 6198 | 5906 | 5633 | 5376 | 5133 | 4903 | 4685 | 4477 |
| 25 | 7604 | 7206 | 6841 | 6505 | 6193 | 5902 | 5629 | 5372 | 5129 | 4900 | 4682 | 4474 |
| 26 | 7597 | 7200 | 6836 | 6500 | 6188 | 5897 | 5624 | 5368 | 5125 | 4896 | 4678 | 4471 |
| 27 | 7590 | 7193 | 6830 | 6494 | 6183 | 5892 | 5620 | 5364 | 5122 | 4892 | 4675 | 4467 |
| 28 | 7583 | 7187 | 6824 | 6489 | 6178 | 5888 | 5615 | 5359 | 5118 | 4889 | 4671 | 4464 |
| 29 | 7577 | 7181 | 6818 | 6484 | 6173 | 5883 | 5611 | 5355 | 5114 | 4885 | 4668 | 4460 |
| 30 | 7570 | 7175 | 6812 | 6478 | 6168 | 5878 | 5607 | 5351 | 5110 | 4881 | 4664 | 4457 |

# TABULA LOGARITHMORUM LOGISTICORUM.

| ′ | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ″ | 600 | 660 | 720 | 780 | 840 | 900 | 960 | 1020 | 1080 | 1140 | 1200 | 1260 |
| 30 | 7570 | 7175 | 6812 | 6478 | 6168 | 5878 | 5607 | 5351 | 5110 | 4881 | 4664 | 4457 |
| 31 | 7563 | 7168 | 6807 | 6473 | 6163 | 5874 | 5602 | 5347 | 5106 | 4877 | 4660 | 4454 |
| 32 | 7556 | 7162 | 6801 | 6467 | 6158 | 5869 | 5598 | 5343 | 5102 | 4874 | 4657 | 4450 |
| 33 | 7549 | 7156 | 6795 | 6462 | 6153 | 5864 | 5594 | 5339 | 5098 | 4870 | 4653 | 4447 |
| 34 | 7542 | 7149 | 6789 | 6457 | 6148 | 5860 | 5589 | 5335 | 5094 | 4866 | 4650 | 4444 |
| 35 | 7535 | 7143 | 6784 | 6451 | 6143 | 5855 | 5585 | 5331 | 5090 | 4863 | 4646 | 4440 |
| 36 | 7528 | 7137 | 6778 | 6446 | 6138 | 5850 | 5580 | 5326 | 5086 | 4859 | 4643 | 4437 |
| 37 | 7522 | 7131 | 6772 | 6441 | 6133 | 5846 | 5576 | 5322 | 5082 | 4855 | 4639 | 4434 |
| 38 | 7515 | 7124 | 6766 | 6435 | 6128 | 5841 | 5572 | 5318 | 5079 | 4852 | 4636 | 4430 |
| 39 | 7508 | 7118 | 6761 | 6430 | 6123 | 5836 | 5567 | 5314 | 5075 | 4848 | 4632 | 4427 |
| 40 | 7501 | 7112 | 6755 | 6425 | 6118 | 5832 | 5563 | 5310 | 5071 | 4844 | 4629 | 4424 |
| 41 | 7494 | 7106 | 6749 | 6420 | 6113 | 5827 | 5559 | 5306 | 5067 | 4841 | 4625 | 4420 |
| 42 | 7488 | 7100 | 6743 | 6414 | 6108 | 5823 | 5554 | 5302 | 5063 | 4837 | 4622 | 4417 |
| 43 | 7481 | 7093 | 6738 | 6409 | 6103 | 5818 | 5550 | 5298 | 5059 | 4833 | 4618 | 4414 |
| 44 | 7474 | 7087 | 6732 | 6404 | 6099 | 5813 | 5546 | 5294 | 5055 | 4830 | 4615 | 4410 |
| 45 | 7467 | 7081 | 6726 | 6398 | 6094 | 5809 | 5541 | 5290 | 5051 | 4826 | 4611 | 4407 |
| 46 | 7461 | 7075 | 6721 | 6393 | 6089 | 5804 | 5537 | 5285 | 5048 | 4822 | 4608 | 4404 |
| 47 | 7454 | 7069 | 6715 | 6388 | 6084 | 5800 | 5533 | 5281 | 5044 | 4819 | 4604 | 4400 |
| 48 | 7447 | 7063 | 6709 | 6383 | 6079 | 5795 | 5528 | 5277 | 5040 | 4815 | 4601 | 4397 |
| 49 | 7441 | 7057 | 6704 | 6377 | 6074 | 5790 | 5524 | 5273 | 5036 | 4811 | 4597 | 4394 |
| 50 | 7434 | 7050 | 6698 | 6372 | 6069 | 5786 | 5520 | 5269 | 5032 | 4808 | 4594 | 4390 |
| 51 | 7427 | 7044 | 6692 | 6367 | 6064 | 5781 | 5516 | 5265 | 5028 | 4804 | 4590 | 4387 |
| 52 | 7421 | 7038 | 6687 | 6362 | 6059 | 5777 | 5511 | 5261 | 5025 | 4800 | 4587 | 4384 |
| 53 | 7414 | 7032 | 6681 | 6357 | 6055 | 5772 | 5507 | 5257 | 5021 | 4797 | 4584 | 4380 |
| 54 | 7407 | 7026 | 6676 | 6351 | 6050 | 5768 | 5503 | 5253 | 5017 | 4793 | 4580 | 4377 |
| 55 | 7401 | 7020 | 6670 | 6346 | 6045 | 5763 | 5498 | 5249 | 5013 | 4789 | 4577 | 4374 |
| 56 | 7394 | 7014 | 6664 | 6341 | 6040 | 5758 | 5494 | 5245 | 5009 | 4786 | 4573 | 4370 |
| 57 | 7387 | 7008 | 6659 | 6336 | 6035 | 5754 | 5490 | 5241 | 5005 | 4782 | 4570 | 4367 |
| 58 | 7381 | 7002 | 6653 | 6331 | 6030 | 5749 | 5486 | 5237 | 5002 | 4778 | 4566 | 4364 |
| 59 | 7374 | 6996 | 6648 | 6325 | 6025 | 5745 | 5481 | 5233 | 4998 | 4775 | 4563 | 4361 |
| 60 | 7368 | 6990 | 6642 | 6320 | 6021 | 5740 | 5477 | 5229 | 4994 | 4771 | 4559 | 4357 |

# TABVLA LOGARITHMORVM LOGISTICORVM.

| / | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| // | 1320 | 1380 | 1440 | 1500 | 1560 | 1620 | 1680 | 1740 | 1800 | 1860 | 1920 | 1980 |
| 0 | 4357 | 4164 | 3979 | 3802 | 3632 | 3468 | 3310 | 3158 | 3010 | 2868 | 2730 | 2596 |
| 1 | 4354 | 4161 | 3976 | 3799 | 3629 | 3465 | 3307 | 3155 | 3008 | 2866 | 2728 | 2594 |
| 2 | 4351 | 4158 | 3973 | 3796 | 3626 | 3463 | 3305 | 3153 | 3005 | 2863 | 2725 | 2592 |
| 3 | 4347 | 4155 | 3970 | 3793 | 3623 | 3460 | 3302 | 3150 | 3003 | 2861 | 2723 | 2590 |
| 4 | 4344 | 4152 | 3967 | 3791 | 3621 | 3457 | 3300 | 3148 | 3001 | 2859 | 2721 | 2588 |
| 5 | 4341 | 4149 | 3964 | 3788 | 3618 | 3454 | 3297 | 3145 | 2998 | 2856 | 2719 | 2585 |
| 6 | 4338 | 4145 | 3961 | 3785 | 3615 | 3452 | 3294 | 3143 | 2996 | 2854 | 2716 | 2583 |
| 7 | 4334 | 4142 | 3958 | 3782 | 3612 | 3449 | 3292 | 3140 | 2993 | 2852 | 2714 | 2581 |
| 8 | 4331 | 4139 | 3955 | 3779 | 3610 | 3446 | 3289 | 3138 | 2991 | 2849 | 2712 | 2579 |
| 9 | 4328 | 4136 | 3952 | 3776 | 3607 | 3444 | 3287 | 3135 | 2989 | 2847 | 2710 | 2577 |
| 10 | 4325 | 4133 | 3949 | 3773 | 3604 | 3441 | 3284 | 3133 | 2986 | 2845 | 2707 | 2574 |
| 11 | 4321 | 4130 | 3946 | 3770 | 3601 | 3438 | 3282 | 3130 | 2984 | 2842 | 2705 | 2572 |
| 12 | 4318 | 4127 | 3943 | 3768 | 3598 | 3436 | 3279 | 3128 | 2981 | 2840 | 2703 | 2570 |
| 13 | 4315 | 4124 | 3940 | 3765 | 3596 | 3433 | 3276 | 3125 | 2979 | 2838 | 2701 | 2568 |
| 14 | 4311 | 4120 | 3937 | 3762 | 3593 | 3431 | 3274 | 3123 | 2977 | 2835 | 2698 | 2566 |
| 15 | 4308 | 4117 | 3934 | 3759 | 3590 | 3428 | 3271 | 3120 | 2974 | 2833 | 2696 | 2564 |
| 16 | 4305 | 4114 | 3931 | 3756 | 3587 | 3425 | 3269 | 3118 | 2972 | 2831 | 2694 | 2561 |
| 17 | 4302 | 4111 | 3928 | 3753 | 3585 | 3423 | 3266 | 3115 | 2969 | 2828 | 2692 | 2559 |
| 18 | 4298 | 4108 | 3925 | 3750 | 3582 | 3420 | 3264 | 3113 | 2967 | 2826 | 2689 | 2557 |
| 19 | 4295 | 4105 | 3922 | 3747 | 3579 | 3417 | 3261 | 3110 | 2965 | 2824 | 2687 | 2555 |
| 20 | 4292 | 4102 | 3919 | 3745 | 3576 | 3415 | 3259 | 3108 | 2962 | 2821 | 2685 | 2553 |
| 21 | 4289 | 4099 | 3917 | 3742 | 3574 | 3412 | 3256 | 3105 | 2960 | 2819 | 2683 | 2551 |
| 22 | 4285 | 4096 | 3914 | 3739 | 3571 | 3409 | 3253 | 3103 | 2958 | 2817 | 2681 | 2548 |
| 23 | 4282 | 4092 | 3911 | 3736 | 3568 | 3407 | 3251 | 3101 | 2955 | 2815 | 2678 | 2546 |
| 24 | 4279 | 4089 | 3908 | 3733 | 3565 | 3404 | 3248 | 3098 | 2953 | 2812 | 2676 | 2544 |
| 25 | 4276 | 4086 | 3905 | 3730 | 3563 | 3401 | 3246 | 3096 | 2950 | 2810 | 2674 | 2542 |
| 26 | 4273 | 4083 | 3902 | 3727 | 3560 | 3399 | 3243 | 3093 | 2948 | 2808 | 2672 | 2540 |
| 27 | 4269 | 4080 | 3899 | 3725 | 3557 | 3396 | 3241 | 3091 | 2946 | 2805 | 2669 | 2538 |
| 28 | 4266 | 4077 | 3896 | 3722 | 3555 | 3393 | 3238 | 3088 | 2943 | 2803 | 2667 | 2535 |
| 29 | 4263 | 4074 | 3893 | 3719 | 3552 | 3391 | 3236 | 3086 | 2941 | 2801 | 2665 | 2533 |
| 30 | 4260 | 4071 | 3890 | 3716 | 3549 | 3388 | 3233 | 3083 | 2939 | 2798 | 2663 | 2531 |

# TABULA LOGARITHMORUM LOGISTICORUM.

| / | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| // | 1320 | 1380 | 1440 | 1500 | 1560 | 1620 | 1680 | 1740 | 1800 | 1860 | 1920 | 1980 |
| 30 | 4260 | 4071 | 3890 | 3716 | 3549 | 3388 | 3233 | 3083 | 2939 | 2798 | 2663 | 2531 |
| 31 | 4256 | 4068 | 3887 | 3713 | 3546 | 3386 | 3231 | 3081 | 2936 | 2796 | 2660 | 2529 |
| 32 | 4253 | 4065 | 3884 | 3710 | 3544 | 3383 | 3228 | 3078 | 2934 | 2794 | 2658 | 2527 |
| 33 | 4250 | 4062 | 3881 | 3708 | 3541 | 3380 | 3225 | 3076 | 2931 | 2792 | 2656 | 2525 |
| 34 | 4247 | 4059 | 3878 | 3705 | 3538 | 3378 | 3223 | 3073 | 2929 | 2789 | 2654 | 2522 |
| 35 | 4244 | 4055 | 3875 | 3702 | 3535 | 3375 | 3220 | 3071 | 2927 | 2787 | 2652 | 2520 |
| 36 | 4240 | 4052 | 3872 | 3699 | 3533 | 3372 | 3218 | 3069 | 2924 | 2785 | 2649 | 2518 |
| 37 | 4237 | 4049 | 3869 | 3696 | 3530 | 3370 | 3215 | 3066 | 2922 | 2782 | 2647 | 2516 |
| 38 | 4234 | 4046 | 3866 | 3693 | 3527 | 3367 | 3213 | 3064 | 2920 | 2780 | 2645 | 2514 |
| 39 | 4231 | 4043 | 3863 | 3691 | 3525 | 3365 | 3210 | 3061 | 2917 | 2778 | 2643 | 2512 |
| 40 | 4228 | 4040 | 3860 | 3688 | 3522 | 3362 | 3208 | 3059 | 2915 | 2775 | 2640 | 2510 |
| 41 | 4224 | 4037 | 3857 | 3685 | 3519 | 3359 | 3205 | 3056 | 2912 | 2773 | 2638 | 2507 |
| 42 | 4221 | 4034 | 3855 | 3682 | 3516 | 3357 | 3203 | 3054 | 2910 | 2771 | 2636 | 2505 |
| 43 | 4218 | 4031 | 3852 | 3679 | 3514 | 3354 | 3200 | 3052 | 2908 | 2769 | 2634 | 2503 |
| 44 | 4215 | 4028 | 3849 | 3677 | 3511 | 3351 | 3198 | 3049 | 2905 | 2766 | 2632 | 2501 |
| 45 | 4212 | 4025 | 3846 | 3674 | 3508 | 3349 | 3195 | 3047 | 2903 | 2764 | 2629 | 2499 |
| 46 | 4209 | 4022 | 3843 | 3671 | 3506 | 3346 | 3193 | 3044 | 2901 | 2762 | 2627 | 2497 |
| 47 | 4205 | 4019 | 3840 | 3668 | 3503 | 3344 | 3190 | 3042 | 2898 | 2760 | 2625 | 2494 |
| 48 | 4202 | 4016 | 3837 | 3665 | 3500 | 3341 | 3188 | 3039 | 2896 | 2757 | 2623 | 2492 |
| 49 | 4199 | 4013 | 3834 | 3663 | 3497 | 3338 | 3185 | 3037 | 2894 | 2755 | 2621 | 2490 |
| 50 | 4196 | 4010 | 3831 | 3660 | 3495 | 3336 | 3183 | 3034 | 2891 | 2753 | 2618 | 2488 |
| 51 | 4193 | 4007 | 3828 | 3657 | 3492 | 3333 | 3180 | 3032 | 2889 | 2750 | 2616 | 2486 |
| 52 | 4189 | 4004 | 3825 | 3654 | 3489 | 3331 | 3178 | 3030 | 2887 | 2748 | 2614 | 2484 |
| 53 | 4186 | 4001 | 3822 | 3651 | 3487 | 3328 | 3175 | 3027 | 2884 | 2746 | 2612 | 2482 |
| 54 | 4183 | 3998 | 3820 | 3649 | 3484 | 3325 | 3173 | 3025 | 2882 | 2744 | 2610 | 2480 |
| 55 | 4180 | 3995 | 3817 | 3646 | 3481 | 3323 | 3170 | 3022 | 2880 | 2741 | 2607 | 2477 |
| 56 | 4177 | 3991 | 3814 | 3643 | 3479 | 3320 | 3168 | 3020 | 2877 | 2739 | 2605 | 2475 |
| 57 | 4174 | 3988 | 3811 | 3640 | 3476 | 3318 | 3165 | 3018 | 2875 | 2737 | 2603 | 2473 |
| 58 | 4171 | 3985 | 3808 | 3637 | 3473 | 3315 | 3163 | 3015 | 2873 | 2735 | 2601 | 2471 |
| 59 | 4167 | 3982 | 3805 | 3635 | 3471 | 3313 | 3160 | 3013 | 2870 | 2732 | 2599 | 2469 |
| 60 | 4164 | 3979 | 3802 | 3632 | 3468 | 3310 | 3158 | 3010 | 2868 | 2730 | 2596 | 2467 |

# TABULA LOGARITHMORUM LOGISTICORUM.

| ′ | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ″ | 2040 | 2100 | 2160 | 2220 | 2280 | 2340 | 2400 | 2460 | 2520 | 2580 | 2640 | 2700 |
| 0 | 2467 | 2341 | 2218 | 2099 | 1984 | 1871 | 1761 | 1654 | 1549 | 1447 | 1347 | 1249 |
| 1 | 2465 | 2339 | 2216 | 2098 | 1982 | 1869 | 1759 | 1652 | 1547 | 1445 | 1345 | 1248 |
| 2 | 2462 | 2337 | 2214 | 2096 | 1980 | 1867 | 1757 | 1650 | 1546 | 1443 | 1344 | 1246 |
| 3 | 2460 | 2335 | 2212 | 2094 | 1978 | 1865 | 1755 | 1648 | 1544 | 1442 | 1342 | 1245 |
| 4 | 2458 | 2333 | 2210 | 2092 | 1976 | 1863 | 1754 | 1647 | 1542 | 1440 | 1340 | 1243 |
| 5 | 2456 | 2331 | 2208 | 2090 | 1974 | 1862 | 1752 | 1645 | 1540 | 1438 | 1339 | 1241 |
| 6 | 2454 | 2328 | 2206 | 2088 | 1972 | 1860 | 1750 | 1643 | 1539 | 1437 | 1337 | 1240 |
| 7 | 2452 | 2326 | 2204 | 2086 | 1970 | 1858 | 1748 | 1641 | 1537 | 1435 | 1335 | 1238 |
| 8 | 2450 | 2324 | 2202 | 2084 | 1968 | 1856 | 1746 | 1640 | 1535 | 1433 | 1334 | 1237 |
| 9 | 2448 | 2322 | 2200 | 2082 | 1967 | 1854 | 1745 | 1638 | 1534 | 1432 | 1332 | 1235 |
| 10 | 2445 | 2320 | 2198 | 2080 | 1965 | 1852 | 1743 | 1636 | 1532 | 1430 | 1331 | 1233 |
| 11 | 2443 | 2318 | 2196 | 2078 | 1963 | 1850 | 1741 | 1634 | 1530 | 1428 | 1329 | 1232 |
| 12 | 2441 | 2316 | 2194 | 2076 | 1961 | 1849 | 1739 | 1633 | 1528 | 1427 | 1327 | 1230 |
| 13 | 2439 | 2314 | 2192 | 2074 | 1959 | 1847 | 1737 | 1631 | 1527 | 1425 | 1326 | 1229 |
| 14 | 2437 | 2312 | 2190 | 2072 | 1957 | 1845 | 1736 | 1629 | 1525 | 1423 | 1324 | 1227 |
| 15 | 2435 | 2310 | 2188 | 2070 | 1955 | 1843 | 1734 | 1627 | 1523 | 1422 | 1322 | 1225 |
| 16 | 2433 | 2308 | 2186 | 2068 | 1953 | 1841 | 1732 | 1626 | 1522 | 1420 | 1321 | 1224 |
| 17 | 2431 | 2306 | 2184 | 2066 | 1951 | 1839 | 1730 | 1624 | 1520 | 1418 | 1319 | 1222 |
| 18 | 2429 | 2304 | 2182 | 2064 | 1950 | 1838 | 1728 | 1622 | 1518 | 1417 | 1317 | 1221 |
| 19 | 2426 | 2302 | 2180 | 2062 | 1948 | 1836 | 1727 | 1620 | 1516 | 1415 | 1316 | 1219 |
| 20 | 2424 | 2300 | 2178 | 2061 | 1946 | 1834 | 1725 | 1619 | 1515 | 1413 | 1314 | 1217 |
| 21 | 2422 | 2298 | 2176 | 2059 | 1944 | 1832 | 1723 | 1617 | 1513 | 1412 | 1313 | 1216 |
| 22 | 2420 | 2296 | 2174 | 2057 | 1942 | 1830 | 1721 | 1615 | 1511 | 1410 | 1311 | 1214 |
| 23 | 2418 | 2294 | 2172 | 2055 | 1940 | 1828 | 1719 | 1613 | 1510 | 1408 | 1309 | 1213 |
| 24 | 2416 | 2291 | 2170 | 2053 | 1938 | 1827 | 1718 | 1612 | 1508 | 1407 | 1308 | 1211 |
| 25 | 2414 | 2289 | 2169 | 2051 | 1936 | 1825 | 1716 | 1610 | 1506 | 1405 | 1306 | 1209 |
| 26 | 2412 | 2287 | 2167 | 2049 | 1934 | 1823 | 1714 | 1608 | 1504 | 1403 | 1304 | 1208 |
| 27 | 2410 | 2285 | 2165 | 2047 | 1933 | 1821 | 1712 | 1606 | 1503 | 1402 | 1303 | 1206 |
| 28 | 2408 | 2283 | 2163 | 2045 | 1931 | 1819 | 1711 | 1605 | 1501 | 1400 | 1301 | 1205 |
| 29 | 2405 | 2281 | 2161 | 2043 | 1929 | 1817 | 1709 | 1603 | 1499 | 1398 | 1300 | 1203 |
| 30 | 2403 | 2279 | 2159 | 2041 | 1927 | 1816 | 1707 | 1601 | 1498 | 1397 | 1298 | 1201 |

# *TABULA LOGARITHMORUM LOGISTICORUM.*

| ′ | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ″ | 2040 | 2100 | 2160 | 2220 | 2280 | 2340 | 2400 | 2460 | 2520 | 2580 | 2640 | 2700 |
| 30 | 2403 | 2279 | 2159 | 2041 | 1927 | 1816 | 1707 | 1601 | 1498 | 1397 | 1298 | 1201 |
| 31 | 2401 | 2277 | 2157 | 2039 | 1925 | 1814 | 1705 | 1599 | 1496 | 1395 | 1296 | 1200 |
| 32 | 2399 | 2275 | 2155 | 2037 | 1923 | 1812 | 1703 | 1598 | 1494 | 1393 | 1295 | 1198 |
| 33 | 2397 | 2273 | 2153 | 2035 | 1921 | 1810 | 1702 | 1596 | 1493 | 1392 | 1293 | 1197 |
| 34 | 2395 | 2271 | 2151 | 2033 | 1919 | 1808 | 1700 | 1594 | 1491 | 1390 | 1291 | 1195 |
| 35 | 2393 | 2269 | 2149 | 2032 | 1918 | 1806 | 1698 | 1593 | 1489 | 1388 | 1290 | 1193 |
| 36 | 2391 | 2267 | 2147 | 2030 | 1916 | 1805 | 1696 | 1591 | 1487 | 1387 | 1288 | 1192 |
| 37 | 2389 | 2265 | 2145 | 2028 | 1914 | 1803 | 1694 | 1589 | 1486 | 1385 | 1287 | 1190 |
| 38 | 2387 | 2263 | 2143 | 2026 | 1912 | 1801 | 1693 | 1587 | 1484 | 1383 | 1285 | 1189 |
| 39 | 2384 | 2261 | 2141 | 2024 | 1910 | 1799 | 1691 | 1585 | 1482 | 1382 | 1283 | 1187 |
| 40 | 2382 | 2259 | 2139 | 2022 | 1908 | 1797 | 1689 | 1584 | 1481 | 1380 | 1282 | 1186 |
| 41 | 2380 | 2257 | 2137 | 2020 | 1906 | 1795 | 1687 | 1582 | 1479 | 1378 | 1280 | 1184 |
| 42 | 2378 | 2255 | 2135 | 2018 | 1904 | 1794 | 1686 | 1580 | 1477 | 1377 | 1278 | 1182 |
| 43 | 2376 | 2253 | 2133 | 2016 | 1903 | 1792 | 1684 | 1578 | 1476 | 1375 | 1277 | 1181 |
| 44 | 2374 | 2251 | 2131 | 2014 | 1901 | 1790 | 1682 | 1577 | 1474 | 1373 | 1275 | 1179 |
| 45 | 2372 | 2249 | 2129 | 2012 | 1899 | 1788 | 1680 | 1575 | 1472 | 1372 | 1274 | 1178 |
| 46 | 2370 | 2247 | 2127 | 2010 | 1897 | 1786 | 1678 | 1573 | 1470 | 1370 | 1272 | 1176 |
| 47 | 2368 | 2245 | 2125 | 2009 | 1895 | 1785 | 1677 | 1571 | 1469 | 1368 | 1270 | 1174 |
| 48 | 2366 | 2243 | 2123 | 2007 | 1893 | 1783 | 1675 | 1570 | 1467 | 1367 | 1269 | 1173 |
| 49 | 2364 | 2241 | 2121 | 2005 | 1891 | 1781 | 1673 | 1568 | 1465 | 1365 | 1267 | 1171 |
| 50 | 2362 | 2239 | 2119 | 2003 | 1889 | 1779 | 1671 | 1566 | 1464 | 1363 | 1266 | 1170 |
| 51 | 2359 | 2237 | 2117 | 2001 | 1888 | 1777 | 1670 | 1565 | 1462 | 1362 | 1264 | 1168 |
| 52 | 2357 | 2235 | 2115 | 1999 | 1886 | 1775 | 1668 | 1563 | 1460 | 1360 | 1262 | 1167 |
| 53 | 2355 | 2233 | 2113 | 1997 | 1884 | 1774 | 1666 | 1561 | 1459 | 1359 | 1261 | 1165 |
| 54 | 2353 | 2231 | 2111 | 1995 | 1882 | 1772 | 1664 | 1559 | 1457 | 1357 | 1259 | 1163 |
| 55 | 2351 | 2229 | 2109 | 1993 | 1880 | 1770 | 1663 | 1558 | 1455 | 1355 | 1257 | 1162 |
| 36 | 2349 | 2227 | 2107 | 1991 | 1878 | 1768 | 1661 | 1556 | 1454 | 1354 | 1256 | 1160 |
| 57 | 2347 | 2225 | 2105 | 1989 | 1876 | 1766 | 1659 | 1554 | 1452 | 1352 | 1254 | 1159 |
| 58 | 2345 | 2223 | 2103 | 1987 | 1875 | 1765 | 1657 | 1552 | 1450 | 1350 | 1253 | 1157 |
| 59 | 2343 | 2220 | 2101 | 1986 | 1873 | 1763 | 1655 | 1551 | 1449 | 1349 | 1251 | 1156 |
| 60 | 2341 | 2218 | 2099 | 1984 | 1871 | 1761 | 1654 | 1549 | 1447 | 1347 | 1249 | 1154 |

| ′ | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ″ | 2760 | 2820 | 2880 | 2940 | 3000 | 3060 | 3120 | 3180 | 3240 | 3300 | 3360 | 3420 | 3480 | 3540 |
| 0 | 1154 | 1061 | 969 | 880 | 792 | 706 | 621 | 539 | 458 | 378 | 300 | 223 | 147 | 73 |
| 1 | 1152 | 1059 | 968 | 878 | 790 | 704 | 620 | 537 | 456 | 377 | 298 | 221 | 146 | 72 |
| 2 | 1151 | 1057 | 966 | 877 | 789 | 703 | 619 | 536 | 455 | 375 | 297 | 220 | 145 | 71 |
| 3 | 1149 | 1056 | 965 | 875 | 787 | 702 | 617 | 535 | 454 | 374 | 296 | 219 | 143 | 69 |
| 4 | 1148 | 1054 | 963 | 874 | 786 | 700 | 616 | 533 | 452 | 373 | 294 | 218 | 142 | 68 |
| 5 | 1146 | 1053 | 962 | 872 | 785 | 699 | 615 | 532 | 451 | 371 | 293 | 216 | 141 | 67 |
| 6 | 1145 | 1051 | 960 | 871 | 783 | 697 | 613 | 531 | 450 | 370 | 292 | 215 | 140 | 66 |
| 7 | 1143 | 1050 | 959 | 869 | 782 | 696 | 612 | 529 | 448 | 369 | 291 | 214 | 139 | 64 |
| 8 | 1141 | 1048 | 957 | 868 | 780 | 694 | 610 | 528 | 447 | 367 | 289 | 213 | 137 | 63 |
| 9 | 1140 | 1047 | 956 | 866 | 779 | 693 | 609 | 526 | 446 | 366 | 288 | 211 | 136 | 62 |
| 10 | 1138 | 1045 | 954 | 865 | 777 | 692 | 608 | 525 | 444 | 365 | 287 | 210 | 135 | 61 |
| 11 | 1137 | 1044 | 953 | 863 | 776 | 690 | 606 | 524 | 443 | 363 | 285 | 209 | 134 | 60 |
| 12 | 1135 | 1042 | 951 | 862 | 774 | 689 | 605 | 522 | 442 | 362 | 284 | 208 | 132 | 58 |
| 13 | 1134 | 1041 | 950 | 860 | 773 | 687 | 603 | 521 | 440 | 361 | 283 | 206 | 131 | 57 |
| 14 | 1132 | 1039 | 948 | 859 | 772 | 686 | 602 | 520 | 439 | 359 | 282 | 205 | 130 | 56 |
| 15 | 1130 | 1037 | 947 | 857 | 770 | 685 | 601 | 518 | 438 | 358 | 280 | 204 | 129 | 55 |
| 16 | 1129 | 1036 | 945 | 856 | 769 | 683 | 599 | 517 | 436 | 357 | 279 | 202 | 127 | 53 |
| 17 | 1127 | 1034 | 944 | 855 | 767 | 682 | 598 | 516 | 435 | 356 | 278 | 201 | 126 | 52 |
| 18 | 1126 | 1033 | 942 | 853 | 766 | 680 | 596 | 514 | 434 | 354 | 276 | 200 | 125 | 51 |
| 19 | 1124 | 1031 | 941 | 852 | 764 | 679 | 595 | 513 | 432 | 353 | 275 | 199 | 124 | 50 |
| 20 | 1123 | 1030 | 939 | 850 | 763 | 678 | 594 | 512 | 431 | 352 | 274 | 197 | 122 | 49 |
| 21 | 1121 | 1028 | 938 | 849 | 762 | 676 | 592 | 510 | 430 | 350 | 273 | 196 | 121 | 47 |
| 22 | 1119 | 1027 | 936 | 847 | 760 | 675 | 591 | 509 | 428 | 349 | 271 | 195 | 120 | 46 |
| 23 | 1118 | 1025 | 935 | 846 | 759 | 673 | 590 | 507 | 427 | 348 | 270 | 194 | 119 | 45 |
| 24 | 1116 | 1024 | 933 | 844 | 757 | 672 | 588 | 506 | 426 | 346 | 269 | 192 | 117 | 44 |
| 25 | 1115 | 1022 | 932 | 843 | 756 | 670 | 587 | 505 | 424 | 345 | 267 | 191 | 116 | 42 |
| 26 | 1113 | 1021 | 930 | 841 | 754 | 669 | 585 | 503 | 423 | 344 | 266 | 190 | 115 | 41 |
| 27 | 1112 | 1019 | 929 | 840 | 753 | 668 | 584 | 502 | 422 | 342 | 265 | 189 | 114 | 40 |
| 28 | 1110 | 1018 | 927 | 838 | 751 | 666 | 583 | 501 | 420 | 341 | 264 | 187 | 112 | 39 |
| 29 | 1109 | 1016 | 926 | 837 | 750 | 665 | 581 | 499 | 419 | 340 | 262 | 186 | 111 | 38 |
| 30 | 1107 | 1015 | 924 | 835 | 749 | 663 | 580 | 498 | 418 | 339 | 261 | 185 | 110 | 36 |

# TABULA LOGARITHMORUM LOGISTICORUM.

| ′ | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ″ | 2760 | 2820 | 2880 | 2940 | 3000 | 3060 | 3120 | 3180 | 3240 | 3300 | 3360 | 3420 | 3480 | 3540 | |
| 30 | 1107 | 1015 | 924 | 835 | 749 | 663 | 580 | 498 | 418 | 339 | 261 | 185 | 110 | 36 | |
| 31 | 1105 | 1013 | 923 | 834 | 747 | 662 | 579 | 497 | 416 | 337 | 260 | 184 | 109 | 35 | |
| 32 | 1104 | 1012 | 921 | 833 | 746 | 661 | 577 | 495 | 415 | 336 | 258 | 182 | 107 | 34 | |
| 33 | 1102 | 1010 | 920 | 831 | 744 | 659 | 576 | 494 | 414 | 335 | 257 | 181 | 106 | 33 | |
| 34 | 1101 | 1008 | 918 | 830 | 743 | 658 | 574 | 493 | 412 | 333 | 256 | 180 | 105 | 31 | |
| 35 | 1099 | 1007 | 917 | 828 | 741 | 656 | 573 | 491 | 411 | 332 | 255 | 179 | 104 | 30 | |
| 36 | 1098 | 1005 | 915 | 827 | 740 | 655 | 572 | 490 | 410 | 331 | 253 | 177 | 103 | 29 | |
| 37 | 1096 | 1004 | 914 | 825 | 739 | 654 | 570 | 489 | 408 | 329 | 252 | 176 | 101 | 28 | |
| 38 | 1095 | 1002 | 912 | 824 | 737 | 652 | 569 | 487 | 407 | 328 | 251 | 175 | 100 | 27 | |
| 39 | 1093 | 1001 | 911 | 822 | 736 | 651 | 568 | 486 | 406 | 327 | 250 | 174 | 99 | 25 | |
| 40 | 1091 | 999 | 909 | 821 | 734 | 649 | 566 | 484 | 404 | 326 | 248 | 172 | 98 | 24 | |
| 41 | 1090 | 998 | 908 | 819 | 733 | 648 | 565 | 483 | 403 | 324 | 247 | 171 | 96 | 23 | |
| 42 | 1088 | 996 | 906 | 818 | 731 | 647 | 563 | 482 | 402 | 323 | 246 | 170 | 95 | 22 | |
| 43 | 1087 | 995 | 905 | 816 | 730 | 645 | 562 | 480 | 400 | 322 | 244 | 169 | 94 | 21 | |
| 44 | 1085 | 993 | 903 | 815 | 729 | 644 | 561 | 479 | 399 | 320 | 243 | 167 | 93 | 19 | |
| 45 | 1084 | 992 | 902 | 814 | 727 | 642 | 559 | 478 | 398 | 319 | 242 | 166 | 91 | 18 | |
| 46 | 1082 | 990 | 900 | 812 | 726 | 641 | 558 | 476 | 396 | 318 | 241 | 165 | 90 | 17 | |
| 47 | 1081 | 989 | 899 | 811 | 724 | 640 | 557 | 475 | 395 | 316 | 239 | 163 | 89 | 16 | |
| 48 | 1079 | 987 | 897 | 809 | 723 | 638 | 555 | 474 | 394 | 315 | 238 | 162 | 88 | 15 | |
| 49 | 1078 | 986 | 896 | 808 | 721 | 637 | 554 | 472 | 392 | 314 | 237 | 161 | 87 | 13 | |
| 50 | 1076 | 984 | 894 | 806 | 720 | 635 | 552 | 471 | 391 | 313 | 235 | 160 | 85 | 12 | |
| 51 | 1074 | 983 | 893 | 805 | 719 | 634 | 551 | 470 | 390 | 311 | 234 | 158 | 84 | 11 | |
| 52 | 1073 | 981 | 891 | 803 | 717 | 633 | 550 | 468 | 388 | 310 | 233 | 157 | 83 | 10 | |
| 53 | 1071 | 980 | 890 | 802 | 716 | 631 | 548 | 467 | 387 | 309 | 232 | 156 | 82 | 8 | |
| 54 | 1070 | 978 | 888 | 801 | 714 | 630 | 547 | 466 | 386 | 307 | 230 | 155 | 80 | 7 | |
| 55 | 1068 | 977 | 887 | 799 | 713 | 628 | 546 | 464 | 384 | 306 | 229 | 153 | 79 | 6 | |
| 56 | 1067 | 975 | 885 | 798 | 711 | 627 | 544 | 463 | 383 | 305 | 228 | 152 | 78 | 5 | |
| 57 | 1065 | 974 | 884 | 796 | 710 | 626 | 543 | 462 | 382 | 304 | 227 | 151 | 77 | 4 | |
| 58 | 1064 | 972 | 883 | 795 | 709 | 624 | 541 | 460 | 381 | 302 | 225 | 150 | 75 | 2 | |
| 59 | 1062 | 971 | 881 | 793 | 707 | 623 | 540 | 459 | 379 | 301 | 224 | 148 | 74 | 1 | |
| 60 | 1061 | 969 | 880 | 792 | 706 | 621 | 539 | 458 | 378 | 300 | 223 | 147 | 73 | 0 | |

| ′ | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ″ | 3600 | 3660 | 3720 | 3780 | 3840 | 3900 | 3960 | 4020 | 4080 | 4140 | 4200 | 4260 | 4320 | 4380 | 4440 |
| 0 | 0 | 71 | 142 | 212 | 280 | 347 | 414 | 479 | 543 | 607 | 669 | 731 | 792 | 851 | 911 |
| 2 | 2 | 74 | 144 | 214 | 282 | 350 | 416 | 481 | 545 | 609 | 671 | 733 | 794 | 853 | 912 |
| 4 | 5 | 76 | 147 | 216 | 285 | 352 | 418 | 483 | 548 | 611 | 673 | 735 | 796 | 855 | 914 |
| 6 | 7 | 79 | 149 | 218 | 287 | 354 | 420 | 485 | 550 | 613 | 675 | 737 | 798 | 857 | 916 |
| 8 | 9 | 81 | 151 | 221 | 289 | 356 | 422 | 488 | 552 | 615 | 677 | 739 | 800 | 859 | 918 |
| 10 | 12 | 83 | 154 | 223 | 291 | 358 | 425 | 490 | 554 | 617 | 679 | 741 | 802 | 861 | 920 |
| 12 | 14 | 86 | 156 | 225 | 294 | 361 | 427 | 492 | 556 | 619 | 682 | 743 | 804 | 863 | 922 |
| 14 | 17 | 88 | 158 | 228 | 296 | 363 | 429 | 494 | 558 | 621 | 684 | 745 | 806 | 865 | 924 |
| 16 | 19 | 90 | 161 | 230 | 298 | 365 | 431 | 496 | 560 | 623 | 686 | 747 | 808 | 867 | 926 |
| 18 | 21 | 93 | 163 | 232 | 300 | 367 | 433 | 498 | 562 | 626 | 688 | 749 | 810 | 869 | 928 |
| 20 | 24 | 95 | 165 | 235 | 303 | 370 | 436 | 500 | 565 | 628 | 690 | 751 | 812 | 871 | 930 |
| 22 | 26 | 98 | 168 | 237 | 305 | 372 | 438 | 503 | 567 | 630 | 692 | 753 | 814 | 873 | 932 |
| 24 | 29 | 100 | 170 | 239 | 307 | 374 | 440 | 505 | 569 | 632 | 694 | 755 | 816 | 875 | 934 |
| 26 | 31 | 102 | 172 | 241 | 309 | 376 | 442 | 507 | 571 | 634 | 696 | 757 | 818 | 877 | 936 |
| 28 | 33 | 105 | 175 | 244 | 312 | 378 | 444 | 509 | 573 | 636 | 698 | 759 | 820 | 879 | 938 |
| 30 | 36 | 107 | 177 | 246 | 314 | 381 | 446 | 511 | 575 | 638 | 700 | 761 | 822 | 881 | 940 |
| 32 | 38 | 109 | 179 | 248 | 316 | 383 | 449 | 513 | 577 | 640 | 702 | 763 | 824 | 883 | 942 |
| 34 | 41 | 112 | 182 | 250 | 318 | 385 | 451 | 516 | 579 | 642 | 704 | 765 | 826 | 885 | 944 |
| 36 | 43 | 114 | 184 | 253 | 321 | 387 | 453 | 518 | 581 | 644 | 706 | 767 | 828 | 887 | 946 |
| 38 | 45 | 116 | 186 | 255 | 323 | 389 | 455 | 520 | 584 | 646 | 708 | 769 | 830 | 889 | 948 |
| 40 | 48 | 119 | 189 | 257 | 325 | 392 | 457 | 522 | 586 | 648 | 710 | 771 | 832 | 891 | 949 |
| 42 | 50 | 121 | 191 | 260 | 327 | 394 | 459 | 524 | 588 | 651 | 712 | 773 | 834 | 893 | 951 |
| 44 | 52 | 123 | 193 | 262 | 329 | 396 | 462 | 526 | 590 | 653 | 714 | 775 | 836 | 895 | 953 |
| 46 | 55 | 126 | 195 | 264 | 332 | 398 | 464 | 528 | 592 | 655 | 716 | 777 | 838 | 897 | 955 |
| 48 | 57 | 128 | 198 | 266 | 334 | 400 | 466 | 530 | 594 | 657 | 719 | 779 | 840 | 899 | 957 |
| 50 | 60 | 130 | 200 | 269 | 336 | 403 | 468 | 533 | 596 | 659 | 721 | 781 | 841 | 901 | 959 |
| 52 | 62 | 133 | 202 | 271 | 338 | 405 | 470 | 535 | 598 | 661 | 723 | 783 | 843 | 903 | 961 |
| 54 | 64 | 135 | 205 | 273 | 341 | 407 | 472 | 537 | 600 | 663 | 725 | 785 | 845 | 905 | 963 |
| 56 | 67 | 137 | 207 | 275 | 343 | 409 | 475 | 539 | 602 | 665 | 727 | 787 | 847 | 907 | 965 |
| 58 | 69 | 140 | 209 | 278 | 345 | 411 | 477 | 541 | 605 | 667 | 729 | 790 | 849 | 909 | 967 |
| 60 | 71 | 142 | 212 | 280 | 347 | 413 | 479 | 543 | 607 | 669 | 731 | 792 | 851 | 911 | 969 |

*Hæc pars* Tabulæ Logistices *addenda est cum est in Primo termino proportionis, subtrahenda in Secundo & Tertio.*

FINIS.

# LUNÆ MERIDIANÆ

ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ

a die Jan. 13. Anni Juliani MDCCXXII ad

diem Dec. 4. Anni MDCCXXV,

ET EJUSDEM

LONGITUDINES IBIDEM OBSERVATÆ

a die Dec. 5. Anni Juliani MDCCXXV ad

diem Dec. 27. Anni MDCCXXXIX.

CUM COMPUTO TABULARUM

COLLATÆ.

# LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXII. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Ascens. Rect. Limbi Lunæ Observata. | | | Ascens. Rect. Limbi Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ′ | ′ | ″ |
| *Jan.* | 13 | 6 | 22 | 4 | 6 | 10 | 7 | 3 | 5 | 54 | 39 | 14 | 0 | 39 | 13 | 25 | —0 | 35 |
| | 14 | 7 | 7 | 53 | 6 | 11 | 2 | 3 | 17 | 57 | 51 | 42 | 0 | 51 | 41 | 3 | —0 | 57 |
| | 15 | 7 | 54 | 20 | 6 | 11 | 58 | 3 | 29 | 41 | 64 | 20 | 0 | 64 | 19 | 40 | —0 | 20 |
| | 16 | 8 | 41 | 53 | 6 | 12 | 54 | 4 | 11 | 8 | 77 | 14 | 10 | 77 | 13 | 24 | —0 | 46 |
| | 17 | 9 | 30 | 20 | 6 | 13 | 49 | 4 | 22 | 22 | 90 | 22 | 0 | 90 | 21 | 53 | —0 | 7 |
| | 18 | 10 | 19 | 18 | 6 | 14 | 45 | 5 | 3 | 27 | 103 | 37 | 50 | 103 | 37 | 45 | —0 | 5 |
| | 19 | 11 | 8 | 14 | 6 | 15 | 41 | 5 | 14 | 27 | 116 | 53 | 0 | 116 | 51 | 40 | —1 | 20 |
| *Cent.* | 20 | 11 | 57 | 30 | 6 | 16 | 37 | 5 | 25 | 26 | 130 | 13 | 0 | 130 | 10 | 35 | —2 | 25 |
| *Feb.* | 12 | 6 | 37 | 10 | 7 | 6 | 58 | 3 | 9 | 6 | 72 | 35 | 0 | 72 | 33 | 44 | —1 | 16 |
| | 13 | 7 | 25 | 44 | 7 | 7 | 54 | 3 | 20 | 42 | 85 | 44 | 45 | 85 | 43 | 36 | —1 | 9 |
| | 14 | 8 | 14 | 45 | 7 | 8 | 49 | 4 | 2 | 5 | 99 | 1 | 0 | 99 | 0 | 34 | —0 | 26 |
| | 15 | 9 | 3 | 42 | 7 | 9 | 44 | 4 | 13 | 19 | 112 | 17 | 0 | 112 | 17 | 23 | +0 | 23 |
| | 16 | 9 | 52 | 11 | 7 | 10 | 39 | 4 | 24 | 29 | 125 | 25 | 0 | 125 | 24 | 20 | —0 | 40 |
| *Cent.* | 19 | 12 | 11 | 42 | 7 | 13 | 24 | 5 | 28 | 2 | 163 | 21 | 0 | 163 | 17 | 40 | —3 | 20 |
| | 21 | 13 | 40 | 25 | 7 | 15 | 14 | 6 | 21 | 7 | 187 | 33 | 30 | 187 | 29 | 50 | —3 | 40 |
| | 24 | 15 | 57 | 34 | 7 | 17 | 58 | 7 | 27 | 52 | 224 | 53 | 40 | 224 | 48 | 43 | —4 | 57 |
| | 25 | 16 | 48 | 2 | 7 | 18 | 53 | 8 | 10 | 51 | 238 | 32 | 0 | 238 | 27 | 20 | —4 | 40 |
| *Mart.* | 11 | 4 | 28 | 58 | 8 | 0 | 45 | 2 | 6 | 23 | 67 | 2 | 45 | 67 | 3 | 16 | +0 | 31 |
| | 15 | 7 | 46 | 25 | 8 | 4 | 23 | 3 | 22 | 54 | 120 | 30 | 0 | 120 | 29 | 0 | —1 | 0 |
| | 16 | 8 | 34 | 13 | 8 | 5 | 17 | 4 | 4 | 15 | 133 | 28 | 0 | 133 | 27 | 0 | —1 | 0 |
| | 17 | 9 | 20 | 42 | 8 | 6 | 11 | 4 | 15 | 36 | 146 | 6 | 20 | 146 | 5 | 45 | —0 | 35 |
| | 18 | 10 | 6 | 2 | 8 | 7 | 6 | 4 | 27 | 1 | 158 | 27 | 20 | 158 | 26 | 48 | —0 | 32 |
| | 19 | 10 | 50 | 30 | 8 | 7 | 59 | 5 | 8 | 32 | 170 | 35 | 0 | 170 | 32 | 50 | —2 | 10 |
| *Cent.* | 20 | 11 | 35 | 35 | 8 | 8 | 54 | 5 | 20 | 14 | 182 | 52 | 40 | 182 | 50 | 0 | —2 | 40 |
| | 22 | 13 | 6 | 41 | 8 | 10 | 42 | 6 | 14 | 21 | 207 | 41 | 0 | 207 | 36 | 28 | —4 | 32 |
| : : | 24 | 14 | 45 | 11 | 8 | 12 | 30 | 7 | 9 | 42 | 234 | 10 | 30 | 234 | 7 | 0 | —3 | 30 |
| | 25 | 15 | 38 | 2 | 8 | 13 | 24 | 7 | 22 | 54 | 248 | 35 | 0 | 248 | 30 | 42 | —4 | 18 |
| | 26 | 16 | 34 | 36 | 8 | 14 | 18 | 8 | 6 | 22 | 263 | 44 | 30 | 263 | 39 | 23 | —5 | 7 |
| | 27 | 17 | 33 | 28 | 8 | 15 | 13 | 8 | 20 | 8 | 279 | 29 | 20 | 279 | 24 | 15 | —5 | 5 |
| | 29 | 19 | 32 | 20 | 8 | 17 | 1 | 9 | 18 | 5 | 311 | 15 | 30 | 311 | 9 | 32 | —5 | 58 |
| | 30 | 20 | 29 | 20 | 8 | 17 | 55 | 10 | 2 | 5 | 326 | 32 | 30 | 326 | 27 | 10 | —5 | 20 |
| | 31 | 21 | 23 | 42 | 8 | 18 | 50 | 10 | 15 | 58 | 341 | 9 | 0 | 341 | 5 | 14 | —3 | 46 |
| *Apri.* | 8 | 3 | 8 | 30 | 8 | 27 | 6 | 1 | 15 | 57 | 74 | 29 | 0 | 74 | 28 | 3 | —0 | 57 |
| *Cent.* | 20 | 12 | 36 | 0 | 9 | 5 | 47 | 6 | 8 | 30 | 228 | 34 | 45 | 228 | 31 | 20 | —3 | 25 |

# *LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

Anno JULIANO MDCCXXII. Currente.

| *Transitus Limbi Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Distantia ☾ à ☉* | | | *Ascens. Rect. Limbi Lunæ Observata.* | | | *Ascens. Rect. Limbi Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Apri.* | 24 | 16 | 28 | 0 | 9 | 9 | 21 | 8 | 2 | 57 | 290 | 40 | 30 | 290 | 37 | 43 | —2 | 47 |
| | 25 | 17 | 27 | 51 | 9 | 10 | 15 | 8 | 16 | 58 | 306 | 40 | 0 | 306 | 36 | 44 | —3 | 16 |
| | 29 | 21 | 0 | 20 | 9 | 13 | 48 | 10 | 11 | 57 | 003 | 53 | 15 | 003 | 48 | 53 | —4 | 22 |
| *Maii.* | 7 | 2 | 40 | 35 | 9 | 19 | 58 | 1 | 8 | 3 | 96 | 4 | 30 | 96 | 2 | 8 | —2 | 22 |
| | 8 | 3 | 31 | 2 | 9 | 20 | 52 | 1 | 19 | 32 | 109 | 42 | 30 | 109 | 40 | 33 | —1 | 57 |
| | 11 | 5 | 53 | 52 | 9 | 23 | 31 | 2 | 23 | 48 | 148 | 28 | 0 | 148 | 27 | 20 | —0 | 40 |
| | 12 | 6 | 38 | 15 | 9 | 24 | 24 | 3 | 5 | 22 | 160 | 34 | 50 | 160 | 34 | 38 | —0 | 12 |
| | 13 | 7 | 21 | 41 | 9 | 25 | 16 | 3 | 17 | 4 | 172 | 27 | 15 | 172 | 26 | 36 | —0 | 39 |
| | 14 | 8 | 4 | 57 | 9 | 26 | 9 | 3 | 29 | 0 | 184 | 17 | 0 | 184 | 16 | 10 | —0 | 50 |
| | 15 | 8 | 48 | 57 | 9 | 27 | 2 | 4 | 11 | 13 | 196 | 18 | 5 | 196 | 16 | 57 | —1 | 8 |
| | 16 | 9 | 34 | 45 | 9 | 27 | 54 | 4 | 23 | 45 | 208 | 46 | 0 | 208 | 44 | 50 | —1 | 10 |
| | 17 | 10 | 23 | 24 | 9 | 28 | 47 | 5 | 6 | 37 | 221 | 57 | 10 | 221 | 54 | 23 | —2 | 47 |
| | 21 | 14 | 17 | 20 | 10 | 2 | 20 | 7 | 1 | 28 | 284 | 32 | 0 | 284 | 32 | 9 | +0 | 9 |
| | 24 | 17 | 16 | 12 | 10 | 4 | 59 | 8 | 14 | 2 | 332 | 19 | 30 | 332 | 19 | 0 | —0 | 30 |
| | 28 | 20 | 32 | 50 | 10 | 8 | 30 | 10 | 7 | 46 | 25 | 34 | 0 | 25 | 31 | 15 | —2 | 45 |
| | 29 | 21 | 19 | 24 | 10 | 9 | 22 | 10 | 20 | 21 | 38 | 13 | 30 | 38 | 11 | 15 | —2 | 15 |
| *Junii.* | 8 | 4 | 33 | 40 | 10 | 17 | 15 | 2 | 4 | 17 | 155 | 57 | 30 | 155 | 55 | 20 | —2 | 10 |
| | 9 | 5 | 16 | 51 | 10 | 18 | 8 | 2 | 15 | 45 | 167 | 46 | 0 | 167 | 45 | 06 | —0 | 54 |
| | 11 | 6 | 41 | 57 | 10 | 19 | 53 | 3 | 9 | 23 | 191 | 4 | 20 | 191 | 3 | 33 | —0 | 47 |
| | 12 | 7 | 25 | 45 | 10 | 20 | 45 | 3 | 21 | 40 | 203 | 2 | 40 | 203 | 1 | 23 | —1 | 17 |
| | 13 | 8 | 11 | 53 | 10 | 21 | 37 | 4 | 4 | 19 | 215 | 35 | 40 | 215 | 33 | 55 | —1 | 45 |
| | 14 | 9 | 1 | 30 | 10 | 22 | 30 | 4 | 17 | 23 | 229 | 0 | 50 | 228 | 58 | 25 | —2 | 25 |
| | 15 | 9 | 55 | 30 | 10 | 23 | 23 | 5 | 0 | 51 | 243 | 32 | 0 | 243 | 29 | 5 | —2 | 55 |
| | 16 | 10 | 55 | 18 | 10 | 24 | 16 | 5 | 14 | 43 | 259 | 31 | 0 | 259 | 29 | 14 | —1 | 46 |
| *Ecl.* ☽ | 17 | 13 | 48 | 36 | 10 | 25 | 13 | 6 | 0 | 0 | ♑ 6 | 49 | 0 | ♒ 6 | 48 | 35 | —0 | 25 |
| | 18 | 13 | 3 | 24 | 10 | 26 | 2 | 6 | 13 | 21 | 293 | 35 | 50 | 293 | 36 | 23 | +0 | 33 |
| | 19 | 14 | 6 | 42 | 10 | 26 | 55 | 6 | 27 | 51 | 310 | 27 | 20 | 310 | 27 | 46 | +0 | 26 |
| | 21 | 16 | 2 | 52 | 10 | 28 | 41 | 7 | 26 | 35 | 341 | 32 | 40 | 341 | 32 | 24 | —0 | 16 |
| | 23 | 17 | 44 | 8 | 11 | 0 | 26 | 8 | 24 | 17 | 08 | 54 | 0 | 8 | 53 | 13 | —0 | 47 |
| : : | 24 | 18 | 31 | 25 | 11 | 1 | 18 | 9 | 7 | 34 | 21 | 44 | 30 | 21 | 42 | 51 | —1 | 39 |
| : : | 26 | 20 | 4 | 45 | 11 | 3 | 3 | 10 | 2 | 57 | 47 | 6 | 30 | 47 | 4 | 37 | —1 | 53 |
| : : | 27 | 20 | 52 | 23 | 11 | 3 | 56 | 10 | 15 | 6 | 60 | 2 | 15 | 60 | 0 | 57 | —1 | 18 |
| : : | 28 | 21 | 41 | 16 | 11 | 4 | 49 | 10 | 26 | 55 | 73 | 16 | 30 | 73 | 15 | 20 | —1 | 10 |

# LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCXXII. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Ascens. Rect. Limbi Lunæ Observata. | | | Ascens. Rect. Limbi Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ″ | ″ |
| *Julii.*:: | 8 | 4 | 38 | 10 | 11 | 12 | 42 | 2 | 8 | 22 | 186 | 39 | 30 | 186 | 39 | 25 | —0 | 5 |
| * | 9 | 9 | 36 | 30 | 11 | 13 | 43 | 2 | 22 | 21 | ♎20 | 12 | 40 | ♎20 | 13 | 0 | +0 | 20 |
| | 10 | 6 | 4 | 20 | 11 | 14 | 26 | 3 | 2 | 30 | 210 | 14 | 0 | 210 | 13 | 40 | —0 | 20 |
| : : | 12 | 7 | 41 | 10 | 11 | 16 | 12 | 3 | 28 | 13 | 236 | 29 | 0 | 236 | 27 | 35 | —1 | 25 |
| | 15 | 10 | 39 | 6 | 11 | 18 | 51 | 5 | 10 | 3 | 284 | 2 | 20 | 284 | 0 | 20 | —2 | 0 |
| *Cent.* | 16 | 11 | 44 | 55 | 11 | 19 | 44 | 5 | 24 | 38 | 301 | 31 | 30 | 301 | 30 | 32 | —0 | 58 |
| : : | 19 | 14 | 44 | 40 | 11 | 22 | 23 | 7 | 8 | 22 | 349 | 33 | 0 | 349 | 34 | 20 | +1 | 20 |
| : : | 21 | 16 | 26 | 30 | 11 | 24 | 9 | 8 | 6 | 13 | 17 | 2 | 20 | 17 | 0 | 40 | —1 | 40 |
| | 22 | 17 | 14 | 36 | 11 | 25 | 0 | 8 | 19 | 36 | 30 | 3 | 0 | 30 | 1 | 20 | —1 | 40 |
| | 23 | 18 | 2 | 0 | 11 | 25 | 53 | 9 | 2 | 32 | 42 | 56 | 45 | 42 | 54 | 54 | —1 | 51 |
| | 24 | 18 | 49 | 50 | 11 | 26 | 47 | 9 | 15 | 2 | 55 | 55 | 45 | 55 | 54 | 5 | —1 | 40 |
| *Aug.* | 7 | 4 | 45 | 50 | 0 | 8 | 15 | 2 | 13 | 53 | 218 | 9 | 0 | 218 | 10 | 9 | +1 | 9 |
| | 10 | 7 | 20 | 15 | 0 | 10 | 54 | 3 | 22 | 58 | 259 | 49 | 0 | 259 | 48 | 50 | —0 | 10 |
| | 11 | 8 | 20 | 5 | 0 | 11 | 48 | 4 | 6 | 52 | 275 | 48 | 0 | 275 | 46 | 43 | —1 | 17 |
| | 13 | 10 | 25 | 47 | 0 | 13 | 35 | 5 | 5 | 37 | 309 | 17 | 0 | 309 | 14 | 35 | —2 | 25 |
| *Cent.* | 14 | 11 | 28 | 25 | 0 | 14 | 29 | 5 | 20 | 14 | 325 | 58 | 15 | 325 | 56 | 27 | —1 | 48 |
| *Cent.* | 15 | 12 | 26 | 48 | 0 | 15 | 23 | 6 | 4 | 48 | 341 | 35 | 30 | 341 | 33 | 37 | —1 | 53 |
| | 17 | 14 | 15 | 7 | 0 | 17 | 10 | 7 | 3 | 21 | 10 | 43 | 0 | 10 | 41 | 24 | —1 | 36 |
| | 18 | 15 | 5 | 22 | 0 | 18 | 3 | 7 | 17 | 9 | 24 | 18 | 0 | 24 | 16 | 22 | —1 | 38 |
| | 20 | 16 | 43 | 53 | 0 | 19 | 50 | 8 | 13 | 32 | 50 | 58 | 0 | 50 | 55 | 34 | —2 | 26 |
| | 21 | 17 | 33 | 32 | 0 | 20 | 43 | 8 | 26 | 7 | 64 | 23 | 30 | 64 | 20 | 11 | —3 | 19 |
| | 26 | 21 | 42 | 4 | 0 | 25 | 11 | 10 | 24 | 24 | 131 | 38 | 0 | 131 | 38 | 43 | +0 | 43 |
| *Sept.*:: | 4 | 7 | 30 | 25 | 1 | 2 | 28 | 1 | 27 | 41 | 228 | 42 | 20 | 228 | 43 | 55 | +1 | 35 |
| * | 5 | 4 | 19 | 30 | 1 | 3 | 13 | 2 | 8 | 15 | 240 | 8 | 0 | 240 | 12 | 33 | +4 | 33 |
| | 8 | 7 | 8 | 42 | 1 | 5 | 55 | 3 | 18 | 24 | 285 | 30 | 20 | 285 | 31 | 31 | +1 | 11 |
| | 9 | 8 | 9 | 34 | 1 | 6 | 50 | 4 | 2 | 30 | 301 | 45 | 0 | 301 | 46 | 11 | +1 | 11 |
| | 11 | 10 | 8 | 21 | 1 | 8 | 38 | 5 | 1 | 8 | 333 | 29 | 45 | 333 | 27 | 17 | —2 | 28 |
| | 12 | 11 | 4 | 7 | 1 | 9 | 33 | 5 | 15 | 28 | 348 | 27 | 40 | 348 | 25 | 42 | —1 | 58 |
| *Cent.* | 13 | 11 | 58 | 42 | 1 | 10 | 27 | 5 | 29 | 40 | 3 | 8 | 0 | 3 | 5 | 25 | —2 | 35 |
| | 15 | 13 | 42 | 10 | 1 | 12 | 15 | 6 | 27 | 17 | 31 | 2 | 30 | 30 | 59 | 56 | —2 | 34 |
| | 16 | 14 | 32 | 44 | 1 | 13 | 9 | 7 | 10 | 36 | 44 | 42 | 0 | 44 | 39 | 01 | —2 | 59 |
| | 17 | 15 | 23 | 38 | 1 | 14 | 4 | 7 | 23 | 33 | 58 | 26 | 50 | 58 | 23 | 18 | —3 | 32 |
| | 18 | 16 | 15 | 2 | 1 | 14 | 58 | 8 | 6 | 8 | 72 | 19 | 0 | 72 | 15 | 35 | —3 | 25 |

# *LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

Anno JULIANO MDCCXXII. Currente.

| *Transitûs Limbi Lunæ* T. æq. | | | | | *Argument. Annuum.* | | | *Distantia* ☾ *à* ☉ | | | *Ascens. Rect. Limbi Lunæ Observata.* | | | *Ascens. Rect. Limbi Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Octob.* | 5 | 5 | 2 | 7 | 1 | 29 | 29 | 2 | 16 | 36 | 280 | 23 | 7 | 280 | 28 | 58 | +5 | 51 |
| | 7 | 7 | 0 | 20 | 2 | 1 | 19 | 3 | 14 | 13 | 311 | 59 | 20 | 312 | 0 | 54 | +1 | 34 |
| | 8 | 7 | 57 | 27 | 2 | 2 | 14 | 3 | 28 | 15 | 327 | 17 | 50 | 327 | 17 | 52 | —0 | 2 |
| | 9 | 8 | 52 | 17 | 2 | 3 | 9 | 4 | 12 | 20 | 342 | 1 | 30 | 342 | 0 | 32 | —0 | 58 |
| | 10 | 9 | 44 | 53 | 2 | 4 | 4 | 4 | 26 | 20 | 356 | 12 | 0 | 356 | 10 | 55 | —1 | 5 |
| *Cent.* | 11 | 10 | 37 | 7 | 2 | 4 | 58 | 5 | 10 | 12 | 10 | 16 | 35 | 10 | 15 | 25 | —1 | 10 |
| *Cent.* | 12 | 11 | 27 | 29 | 2 | 5 | 54 | 5 | 23 | 48 | 23 | 53 | 20 | 23 | 51 | 48 | —1 | 32 |
| *Cent.* | 13 | 12 | 17 | 56 | 2 | 6 | 49 | 6 | 7 | 9 | 37 | 31 | 25 | 37 | 29 | 45 | —1 | 40 |
| | 14 | 13 | 10 | 17 | 2 | 7 | 44 | 6 | 20 | 13 | 51 | 38 | 0 | 51 | 35 | 29 | —2 | 31 |
| | 15 | 14 | 2 | 23 | 2 | 8 | 39 | 7 | 1 | 58 | 65 | 40 | 40 | 65 | 37 | 56 | —2 | 44 |
| | 16 | 14 | 55 | 17 | 2 | 9 | 34 | 7 | 15 | 24 | 79 | 55 | 30 | 79 | 51 | 22 | —4 | 8 |
| | 17 | 15 | 48 | 11 | 2 | 10 | 29 | 7 | 27 | 33 | 94 | 10 | 20 | 94 | 5 | 40 | —4 | 40 |
| | 19 | 17 | 30 | 42 | 2 | 12 | 20 | 8 | 21 | 8 | 121 | 50 | 30 | 121 | 45 | 29 | —5 | 1 |
| | 20 | 18 | 18 | 57 | 2 | 13 | 15 | 9 | 2 | 40 | 134 | 55 | 20 | 134 | 50 | 57 | —4 | 23 |
| | 23 | 20 | 31 | 38 | 2 | 16 | 0 | 10 | 6 | 50 | 171 | 8 | 30 | 171 | 6 | 10 | —2 | 20 |
| | 24 | 21 | 13 | 43 | 2 | 16 | 55 | 10 | 18 | 17 | 182 | 40 | 40 | 182 | 38 | 0 | —2 | 40 |
| *Nov.* | 2 | 3 | 56 | 34 | 2 | 24 | 18 | 1 | 28 | 27 | 291 | 33 | 10 | 291 | 36 | 44 | +3 | 34 |
| | 3 | 4 | 55 | 45 | 2 | 25 | 14 | 2 | 12 | 13 | 307 | 22 | 30 | 307 | 25 | 56 | +3 | 26 |
| | 5 | 6 | 47 | 14 | 2 | 27 | 5 | 3 | 10 | 0 | 337 | 17 | 30 | 337 | 18 | 46 | +1 | 16 |
| | 7 | 8 | 28 | 50 | 2 | 28 | 56 | 4 | 7 | 32 | 4 | 44 | 0 | 4 | 44 | 10 | +0 | 10 |
| | 9 | 10 | 6 | 38 | 3 | 0 | 48 | 5 | 4 | 17 | 31 | 13 | 20 | 31 | 13 | 14 | —0 | 6 |
| | 10 | 10 | 56 | 22 | 3 | 1 | 43 | 5 | 17 | 16 | 44 | 40 | 30 | 44 | 41 | 0 | +0 | 30 |
| *Cent.* | 11 | 11 | 48 | 42 | 3 | 2 | 39 | 5 | 29 | 58 | 58 | 46 | 50 | 58 | 46 | 3 | —0 | 47 |
| | 13 | 13 | 35 | 55 | 3 | 4 | 31 | 6 | 24 | 33 | 87 | 37 | 30 | 87 | 34 | 59 | —2 | 31 |
| | 14 | 14 | 29 | 9 | 3 | 5 | 26 | 7 | 6 | 27 | 101 | 57 | 30 | 101 | 54 | 18 | —3 | 12 |
| | 16 | 16 | 11 | 5 | 3 | 7 | 18 | 7 | 29 | 43 | 129 | 28 | 45 | 129 | 24 | 45 | —4 | 0 |
| | 18 | 17 | 43 | 15 | 3 | 9 | 9 | 8 | 22 | 32 | 154 | 33 | 20 | 154 | 30 | 32 | —2 | 48 |
| | 19 | 18 | 26 | 8 | 3 | 10 | 5 | 9 | 3 | 56 | 166 | 17 | 45 | 166 | 15 | 57 | —1 | 48 |
| | 20 | 19 | 7 | 56 | 3 | 11 | 1 | 9 | 15 | 24 | 177 | 45 | 30 | 177 | 43 | 44 | —1 | 46 |
| *Ecl.* ☉ | 27 | 2 | 7 | 25 | 3 | 16 | 40 | 0 | 0 | 0 | ♌ 16 | 17 | 43 | ♌ 16 | 17 | 30 | —0 | 13 |
| *Dec.* | 2 | 4 | 43 | 51 | 3 | 21 | 16 | 2 | 7 | 35 | 332 | 58 | 30 | 333 | 0 | 12 | +1 | 42 |
| | 4 | 6 | 26 | 40 | 3 | 23 | 8 | 3 | 5 | 18 | 00 | 43 | 0 | 00 | 43 | 13 | +0 | 13 |
| | 7 | 8 | 50 | 46 | 3 | 25 | 56 | 4 | 15 | 8 | 39 | 48 | 0 | 39 | 46 | 46 | —1 | 14 |
| *Cent.* | 10 | 11 | 24 | 37 | 3 | 28 | 44 | 5 | 22 | 17 | 81 | 19 | 30 | 81 | 19 | 8 | —0 | 22 |

# *LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

## Anno JULIANO MDCCXXII. Currente.

| *Tranſitûs Limbi Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Diſtantia ☾ à ☉* | | | *Aſcenſ. Rect. Limbi Lunæ Obſervata.* | | | *Aſcenſ. Rect. Limbi Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Cent.* | 11 | 12 | 17 | 46 | 3 | 29 | 40 | 6 | 4 | 7 | 95 | 38 | 0 | 95 | 36 | 55 | —1 | 5 |
| *Dec.* | 13 | 14 | 2 | 41 | 4 | 1 | 32 | 6 | 27 | 10 | 123 | 54 | 30 | 123 | 51 | 40 | —2 | 50 |
| | 15 | 15 | 37 | 24 | 4 | 3 | 24 | 7 | 19 | 43 | 149 | 37 | 20 | 149 | 35 | 7 | —2 | 13 |
| | 17 | 17 | 3 | 0 | 4 | 5 | 16 | 8 | 12 | 14 | 173 | 3 | 0 | 173 | 1 | 18 | —1 | 42 |
| | 18 | 17 | 44 | 0 | 4 | 6 | 11 | 8 | 23 | 38 | 184 | 19 | 0 | 184 | 17 | 22 | —1 | 38 |
| | 20 | 19 | 7 | 19 | 4 | 8 | 3 | 9 | 17 | 5 | 207 | 10 | 30 | 207 | 8 | 44 | —1 | 46 |
| | 21 | 19 | 51 | 54 | 4 | 8 | 59 | 9 | 29 | 15 | 219 | 20 | 0 | 219 | 18 | 37 | —1 | 23 |
| | 22 | 20 | 39 | 58 | 4 | 9 | 55 | 10 | 11 | 46 | 232 | 22 | 0 | 232 | 19 | 56 | —2 | 4 |
| *Dec.* | 31 | 4 | 22 | 38 | 4 | 17 | 25 | 2 | 2 | 25 | 356 | 14 | 20 | 356 | 15 | 0 | +0 | 40 |
| ✱ | 31 | 6 | 13 | 20 | 4 | 17 | 29 | 2 | 3 | 28 | 357 | 31 | 25 | 357 | 32 | 47 | +1 | 22 |

## Anno JULIANO MDCCXXIII. Currente.

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Jan.* | 2 | 6 | 0 | 48 | 4 | 19 | 17 | 2 | 29 | 54 | 22 | 49 | 0 | 22 | 47 | 50 | —1 | 10 |
| | 6 | 9 | 18 | 9 | 4 | 23 | 1 | 4 | 20 | 46 | 76 | 14 | 0 | 76 | 11 | 57 | —2 | 3 |
| | 7 | 10 | 10 | 17 | 4 | 23 | 57 | 5 | 2 | 39 | 90 | 17 | 20 | 90 | 16 | 13 | —1 | 7 |
| *Cent.* | 10 | 12 | 44 | 36 | 4 | 26 | 44 | 6 | 6 | 50 | 131 | 55 | 45 | 131 | 53 | 26 | —2 | 19 |
| | 11 | 13 | 32 | 40 | 4 | 27 | 40 | 6 | 17 | 56 | 144 | 58 | 0 | 144 | 55 | 43 | —2 | 17 |
| | 12 | 14 | 17 | 13 | 4 | 28 | 36 | 6 | 28 | 58 | 157 | 7 | 0 | 157 | 3 | 33 | —3 | 27 |
| | 13 | 14 | 59 | 40 | 4 | 29 | 32 | 7 | 10 | 0 | 168 | 44 | 30 | 168 | 42 | 26 | —2 | 4 |
| | 14 | 15 | 40 | 44 | 5 | 0 | 27 | 7 | 21 | 8 | 180 | 1 | 30 | 179 | 59 | 30 | —2 | 0 |
| *Jan.* | 16 | 17 | 2 | 11 | 5 | 2 | 18 | 8 | 13 | 54 | 202 | 25 | 0 | 202 | 24 | 4 | —0 | 56 |
| *Feb.* :: | 7 | 11 | 27 | 22 | 5 | 21 | 47 | 5 | 17 | 9 | 140 | 10 | 0 | 140 | 8 | 57 | —1 | 3 |
| | 9 | 12 | 57 | 47 | 5 | 23 | 38 | 6 | 9 | 13 | 164 | 48 | 15 | 164 | 45 | 50 | —2 | 25 |
| :: | 10 | 13 | 39 | 10 | 5 | 24 | 33 | 6 | 19 | 59 | 176 | 10 | 0 | 176 | 7 | 20 | —2 | 40 |
| | 11 | 14 | 19 | 51 | 5 | 25 | 28 | 7 | 1 | 0 | 187 | 21 | 0 | 187 | 17 | 19 | —3 | 41 |
| | 12 | 15 | 0 | 21 | 5 | 26 | 23 | 7 | 12 | 11 | 198 | 29 | 20 | 198 | 26 | 34 | —2 | 46 |
| | 13 | 15 | 41 | 50 | 5 | 27 | 17 | 7 | 23 | 36 | 209 | 52 | 20 | 209 | 49 | 53 | —2 | 27 |
| | 17 | 18 | 55 | 30 | 6 | 0 | 58 | 9 | 12 | 47 | 262 | 21 | 40 | 262 | 20 | 14 | —1 | 26 |
| *Feb.* ✱ | 26 | 7 | 32 | 13 | 6 | 8 | 31 | 1 | 9 | 9 | 27 | 33 | 30 | 27 | 35 | 0 | +1 | 30 |
| *Mart.* :: | 1 | 5 | 8 | 23 | 6 | 11 | 5 | 2 | 16 | 46 | 66 | 50 | 50 | 66 | 48 | 19 | —2 | 31 |
| | 2 | 6 | 1 | 23 | 6 | 11 | 59 | 2 | 29 | 27 | 81 | 7 | 0 | 81 | 4 | 4 | —2 | 56 |
| | 3 | 6 | 54 | 22 | 6 | 12 | 54 | 3 | 11 | 43 | 95 | 23 | 0 | 95 | 19 | 47 | —3 | 13 |

# LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIII. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Ascens. Rect. Limbi Lunæ Observata. | | | Ascens. Rect. Limbi Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | ♌. | ′ | ″ | ♌. | ′ | ″ | ′ | ″ |
| *Mart.* | 4 | 7 | 46 | 28 | 6 | 13 | 49 | 3 | 23 | 38 | 109 | 26 | 0 | 109 | 22 | 53 | −3 | 7 |
| | 6 | 9 | 25 | 2 | 6 | 15 | 38 | 4 | 16 | 35 | 136 | 6 | 50 | 136 | 5 | 12 | −1 | 38 |
| | 7 | 10 | 10 | 47 | 6 | 16 | 33 | 4 | 27 | 43 | 148 | 34 | 0 | 148 | 32 | 20 | −1 | 40 |
| | 8 | 10 | 54 | 21 | 6 | 17 | 27 | 5 | 8 | 45 | 160 | 28 | 30 | 160 | 27 | 2 | −1 | 38 |
| | 11 | 12 | 59 | 41 | 6 | 20 | 10 | 6 | 11 | 45 | 194 | 51 | 0 | 194 | 47 | 44 | −3 | 16 |
| | 12 | 13 | 40 | 55 | 6 | 21 | 4 | 6 | 22 | 58 | 206 | 10 | 20 | 206 | 6 | 52 | −3 | 28 |
| | 13 | 14 | 23 | 38 | 6 | 21 | 58 | 7 | 4 | 23 | 217 | 52 | 0 | 217 | 48 | 50 | −3 | 10 |
| | 14 | 15 | 8 | 51 | 6 | 22 | 52 | 7 | 16 | 7 | 230 | 11 | 10 | 230 | 7 | 2 | −4 | 8 |
| | 15 | 15 | 57 | 6 | 6 | 23 | 47 | 7 | 28 | 11 | 243 | 16 | 10 | 243 | 12 | 27 | −3 | 43 |
| | 16 | 16 | 48 | 57 | 6 | 24 | 41 | 8 | 10 | 55 | 257 | 15 | 0 | 257 | 11 | 38 | −3 | 22 |
| | 17 | 17 | 44 | 18 | 6 | 25 | 36 | 8 | 23 | 33 | 272 | 6 | 50 | 272 | 3 | 12 | −3 | 38 |
| | 18 | 18 | 42 | 21 | 6 | 26 | 30 | 9 | 6 | 52 | 287 | 39 | 0 | 287 | 34 | 44 | −4 | 16 |
| | 19 | 19 | 41 | 36 | 6 | 27 | 25 | 9 | 20 | 35 | 303 | 29 | 15 | 303 | 24 | 25 | −4 | 50 |
| | 20 | 20 | 40 | 27 | 6 | 28 | 19 | 10 | 4 | 37 | 319 | 13 | 40 | 319 | 8 | 32 | −5 | 8 |
| | 21 | 21 | 37 | 42 | 6 | 29 | 14 | 10 | 18 | 54 | 334 | 34 | 0 | 334 | 29 | 21 | −4 | 39 |
| | 22 | 22 | 32 | 55 | 7 | 0 | 8 | 11 | 3 | 19 | 349 | 23 | 30 | 349 | 18 | 24 | −5 | 6 |
| | 27 | 2 | 1 | 49 | 7 | 3 | 45 | 1 | 0 | 0 | 45 | 42 | 15 | 45 | 42 | 35 | +0 | 20 |
| *Mar.* | 29 | 3 | 50 | 26 | 7 | 5 | 33 | 1 | 26 | 38 | 74 | 54 | 10 | 74 | 53 | 21 | −0 | 49 |
| *Apri.* | 1 | 6 | 31 | 30 | 7 | 8 | 15 | 3 | 3 | 45 | 118 | 14 | 15 | 118 | 12 | 18 | −1 | 57 |
| | 2 | 7 | 21 | 6 | 7 | 9 | 9 | 3 | 15 | 28 | 131 | 39 | 15 | 131 | 37 | 49 | −1 | 28 |
| | 4 | 8 | 52 | 10 | 7 | 10 | 56 | 4 | 8 | 13 | 156 | 27 | 20 | 156 | 26 | 45 | −0 | 35 |
| | 6 | 10 | 15 | 32 | 7 | 12 | 43 | 5 | 0 | 31 | 179 | 19 | 40 | 179 | 19 | 38 | −0 | 2 |
| | 7 | 10 | 56 | 10 | 7 | 13 | 37 | 5 | 11 | 40 | 190 | 30 | 0 | 190 | 28 | 57 | −1 | 3 |
| | 8 | 11 | 37 | 15 | 7 | 14 | 30 | 5 | 22 | 54 | 201 | 47 | 0 | 201 | 45 | 15 | −1 | 45 |
| *Cent.* | 9 | 12 | 20 | 43 | 7 | 15 | 24 | 6 | 4 | 17 | 213 | 40 | 0 | 213 | 37 | 43 | −2 | 17 |
| | 10 | 13 | 6 | 31 | 7 | 16 | 17 | 6 | 15 | 55 | 226 | 8 | 0 | 226 | 4 | 40 | −3 | 20 |
| | 12 | 14 | 45 | 20 | 7 | 18 | 4 | 7 | 10 | 1 | 252 | 52 | 20 | 252 | 48 | 45 | −3 | 35 |
| | 14 | 16 | 36 | 44 | 7 | 19 | 52 | 8 | 5 | 33 | 282 | 46 | 30 | 282 | 42 | 29 | −4 | 1 |
| | 16 | 18 | 32 | 25 | 7 | 21 | 40 | 9 | 2 | 31 | 313 | 44 | 45 | 313 | 40 | 11 | −4 | 34 |
| | 18 | 20 | 22 | 26 | 7 | 23 | 26 | 10 | 0 | 30 | 343 | 17 | 45 | 343 | 11 | 57 | −5 | 48 |
| | 19 | 21 | 14 | 41 | 7 | 24 | 20 | 10 | 14 | 41 | 357 | 22 | 45 | 357 | 16 | 50 | −5 | 55 |
| | 26 | 2 | 31 | 25 | 7 | 29 | 40 | 1 | 6 | 42 | 82 | 41 | 30 | 82 | 40 | 24 | −1 | 6 |
| *Apri.* | 29 | 5 | 13 | 41 | 8 | 2 | 20 | 2 | 13 | 44 | 126 | 19 | 45 | 126 | 19 | 44 | −0 | 1 |
| *Maii.* | 1 | 6 | 48 | 4 | 8 | 4 | 7 | 3 | 7 | 4 | 151 | 57 | 40 | 151 | 57 | 48 | +0 | 8 |

# *LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

Anno JULIANO MDCCXXIII. Currente.

| | *Transitus Limbi Lunæ T. æq.* | | | | *Argument. Annuum.* | | | *Distantia ☾ à ☉* | | | *Ascens. Rect. Limbi Lunæ Observata.* | | | *Ascens. Rect. Limbi Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ″ | ″ |
| *Maii.* | | 2 | 7 | 31 | 11 | 8 | 4 | 59 | 3 | 18 | 29 | 163 | 45 | 20 | 163 | 46 | 01 | +0 | 41 |
| | | 3 | 8 | 12 | 34 | 8 | 5 | 52 | 3 | 29 | 49 | 175 | 6 | 45 | 175 | 8 | 2 | +1 | 17 |
| | | 4 | 8 | 53 | 10 | 8 | 6 | 45 | 4 | 11 | 9 | 186 | 16 | 30 | 186 | 17 | 22 | +0 | 52 |
| :: | | 5 | 9 | 33 | 48 | 8 | 7 | 38 | 4 | 22 | 31 | 197 | 27 | 0 | 197 | 28 | 43 | +1 | 43 |
| | | 6 | 10 | 15 | 44 | 8 | 8 | 30 | 5 | 4 | 0 | 208 | 56 | 45 | 208 | 57 | 5 | +0 | 20 |
| | | 7 | 10 | 59 | 45 | 8 | 9 | 23 | 5 | 15 | 40 | 220 | 58 | 0 | 220 | 57 | 12 | −0 | 48 |
| | | 9 | 12 | 39 | 41 | 8 | 11 | 9 | 6 | 9 | 47 | 247 | 59 | 30 | 247 | 56 | 55 | −2 | 35 |
| | | 10 | 13 | 34 | 2 | 8 | 12 | 2 | 6 | 22 | 17 | 262 | 36 | 0 | 262 | 32 | 58 | −3 | 2 |
| | | 26 | 3 | 3 | 17 | 8 | 25 | 17 | 1 | 12 | 2 | 120 | 15 | 0 | 120 | 14 | 54 | −0 | 6 |
| | | 28 | 4 | 41 | 44 | 8 | 27 | 2 | 2 | 5 | 37 | 146 | 54 | 0 | 146 | 54 | 20 | +0 | 20 |
| *Maii.* | | 31 | 6 | 49 | 3 | 8 | 29 | 40 | 3 | 10 | 1 | 181 | 46 | 30 | 181 | 47 | 40 | +1 | 10 |
| *Junii.* | | 1 | 7 | 29 | 20 | 9 | 0 | 32 | 3 | 21 | 29 | 192 | 51 | 30 | 192 | 53 | 14 | +1 | 44 |
| | | 2 | 8 | 10 | 20 | 9 | 1 | 24 | 4 | 3 | 3 | 204 | 7 | 15 | 204 | 8 | 48 | +1 | 33 |
| | | 3 | 8 | 53 | 3 | 9 | 2 | 17 | 4 | 14 | 47 | 215 | 49 | 0 | 215 | 50 | 39 | +1 | 39 |
| | | 5 | 10 | 27 | 56 | 9 | 4 | 2 | 5 | 8 | 58 | 241 | 34 | 20 | 241 | 34 | 28 | +0 | 8 |
| *Cent.* | | 6 | 11 | 22 | 32 | 9 | 4 | 55 | 5 | 21 | 31 | 256 | 14 | 50 | 256 | 14 | 32 | −0 | 18 |
| *Cent.* | | 7 | 12 | 19 | 47 | 9 | 5 | 47 | 6 | 4 | 24 | 271 | 35 | 0 | 271 | 34 | 30 | −0 | 30 |
| | | 8 | 13 | 20 | 44 | 9 | 6 | 40 | 6 | 17 | 36 | 287 | 51 | 0 | 287 | 49 | 59 | −1 | 1 |
| *Cent.*:: | | 9 | 14 | 19 | 31 | 9 | 7 | 33 | 7 | 1 | 5 | 303 | 34 | 15 | 303 | 33 | 23 | −0 | 52 |
| | | 10 | 15 | 19 | 9 | 9 | 8 | 26 | 7 | 14 | 49 | 319 | 30 | 20 | 319 | 28 | 42 | −1 | 38 |
| | | 11 | 16 | 14 | 38 | 9 | 9 | 19 | 7 | 28 | 42 | 334 | 24 | 0 | 334 | 21 | 58 | −2 | 2 |
| | | 13 | 17 | 57 | 16 | 9 | 11 | 4 | 8 | 26 | 38 | 02 | 6 | 0 | 02 | 1 | 51 | −4 | 9 |
| | | 15 | 19 | 34 | 45 | 9 | 12 | 49 | 9 | 24 | 14 | 28 | 30 | 30 | 28 | 26 | 7 | −4 | 23 |
| | | 18 | 22 | 9 | 34 | 9 | 15 | 28 | 11 | 4 | 0 | 70 | 16 | 40 | 70 | 13 | 50 | −2 | 50 |
| :: | | 28 | 5 | 24 | 58 | 9 | 23 | 21 | 2 | 20 | 15 | 188 | 17 | 45 | 188 | 18 | 58 | +1 | 13 |
| | | 29 | 6 | 5 | 8 | 9 | 24 | 13 | 3 | 1 | 44 | 199 | 21 | 0 | 199 | 23 | 5 | +2 | 5 |
| *Junii.* | | 30 | 6 | 46 | 29 | 9 | 25 | 5 | 3 | 13 | 23 | 210 | 42 | 0 | 210 | 44 | 5 | +2 | 5 |
| *Julii.* | | 1 | 7 | 30 | 4 | 9 | 25 | 57 | 3 | 25 | 15 | 222 | 36 | 45 | 222 | 38 | 56 | +2 | 11 |
| | | 2 | 8 | 17 | 3 | 9 | 26 | 50 | 4 | 7 | 24 | 235 | 22 | 30 | 235 | 23 | 50 | +1 | 20 |
| | | 4 | 10 | 3 | 46 | 9 | 28 | 35 | 5 | 2 | 43 | 264 | 6 | 0 | 264 | 5 | 20 | −0 | 40 |
| | | 5 | 11 | 3 | 0 | 9 | 29 | 28 | 5 | 15 | 56 | 279 | 56 | 0 | 279 | 55 | 14 | −0 | 46 |
| *Cent.* | | 7 | 13 | 6 | 10 | 10 | 1 | 15 | 6 | 13 | 20 | 312 | 47 | 0 | 312 | 46 | 13 | −0 | 47 |
| | | 10 | 15 | 53 | 12 | 10 | 3 | 53 | 7 | 25 | 42 | 357 | 36 | 40 | 357 | 35 | 54 | −0 | 46 |
| | | 11 | 16 | 43 | 22 | 10 | 4 | 46 | 8 | 9 | 48 | 11 | 10 | 0 | 11 | 8 | 14 | −1 | 46 |

# LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIII. Currente.

| Transitus Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Ascens. Rect. Limbi Lunæ Observata. | | | Ascens. Rect. Limbi Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Julii.* | 13 | 18 | 21 | 53 | 10 | 6 | 31 | 9 | 7 | 26 | 37 | 50 | 30 | 37 | 47 | 47 | —2 | 43 |
| | 14 | 19 | 12 | 22 | 10 | 7 | 24 | 9 | 20 | 50 | 51 | 31 | 0 | 51 | 27 | 2 | —3 | 58 |
| | 16 | 20 | 58 | 41 | 10 | 9 | 10 | 10 | 16 | 42 | 80 | 6 | 30 | 80 | 4 | 43 | —1 | 47 |
| | 17 | 21 | 53 | 28 | 10 | 10 | 3 | 10 | 29 | 6 | 94 | 49 | 30 | 94 | 48 | 30 | —1 | 0 |
| | 23 | 1 | 59 | 32 | 10 | 14 | 27 | 0 | 27 | 11 | 161 | 26 | 30 | 161 | 28 | 0 | +1 | 30 |
| : : | 25 | 3 | 21 | 48 | 10 | 16 | 12 | 1 | 19 | 31 | 184 | 2 | 0 | 184 | 2 | 54 | +0 | 54 |
| | 26 | 4 | 1 | 36 | 10 | 17 | 4 | 2 | 0 | 46 | 195 | 0 | 0 | 195 | 1 | 32 | +1 | 32 |
| *Julii.* | 30 | 6 | 56 | 30 | 10 | 20 | 35 | 3 | 17 | 49 | 242 | 47 | 0 | 242 | 49 | 15 | +2 | 15 |
| *Aug.* | 1 | 8 | 45 | 40 | 10 | 22 | 22 | 4 | 13 | 24 | 272 | 7 | 0 | 272 | 6 | 15 | —0 | 45 |
| | 3 | 10 | 46 | 53 | 10 | 24 | 8 | 5 | 10 | 36 | 304 | 28 | 40 | 304 | 26 | 7 | —2 | 33 |
| | 5 | 12 | 47 | 42 | 10 | 25 | 55 | 6 | 9 | 1 | 336 | 44 | 15 | 336 | 41 | 54 | —2 | 21 |
| | 6 | 13 | 42 | 48 | 10 | 26 | 49 | 6 | 23 | 26 | 351 | 32 | 0 | 351 | 29 | 55 | —2 | 5 |
| | 7 | 14 | 35 | 27 | 10 | 27 | 42 | 7 | 7 | 51 | 5 | 43 | 0 | 5 | 41 | 17 | —1 | 43 |
| | 8 | 15 | 26 | 37 | 10 | 28 | 35 | 7 | 22 | 8 | 19 | 31 | 45 | 19 | 29 | 47 | —1 | 58 |
| : : | 9 | 16 | 17 | 14 | 10 | 29 | 28 | 8 | 6 | 13 | 33 | 12 | 0 | 33 | 11 | 44 | —0 | 16 |
| | 11 | 18 | 1 | 9 | 11 | 1 | 15 | 9 | 3 | 26 | 61 | 13 | 40 | 61 | 10 | 14 | —3 | 26 |
| | 14 | 20 | 43 | 44 | 11 | 3 | 55 | 10 | 11 | 27 | 104 | 56 | 30 | 104 | 55 | 37 | —0 | 53 |
| | 25 | 4 | 3 | 38 | 11 | 12 | 47 | 2 | 4 | 24 | 225 | 4 | 30 | 225 | 8 | 42 | +4 | 12 |
| | 26 | 4 | 49 | 28 | 11 | 13 | 41 | 2 | 16 | 11 | 237 | 33 | 0 | 237 | 36 | 56 | +3 | 56 |
| | 27 | 5 | 38 | 56 | 11 | 14 | 34 | 2 | 28 | 20 | 250 | 56 | 0 | 250 | 59 | 28 | +3 | 28 |
| | 28 | 6 | 32 | 20 | 11 | 15 | 28 | 3 | 10 | 53 | 265 | 18 | 30 | 265 | 21 | 40 | +3 | 10 |
| | 29 | 7 | 29 | 17 | 11 | 16 | 22 | 3 | 23 | 53 | 280 | 34 | 10 | 280 | 34 | 44 | +0 | 34 |
| | 30 | 8 | 28 | 32 | 11 | 17 | 16 | 4 | 7 | 19 | 296 | 24 | 30 | 296 | 23 | 12 | —1 | 18 |
| *Aug.* | 31 | 9 | 28 | 24 | 11 | 18 | 10 | 4 | 21 | 9 | 312 | 23 | 30 | 312 | 20 | 0 | —3 | 30 |
| *Sept.* | 1 | 10 | 27 | 6 | 11 | 19 | 4 | 5 | 5 | 19 | 328 | 6 | 0 | 328 | 1 | 32 | —4 | 28 |
| *Cent.* | 2 | 11 | 24 | 58 | 11 | 19 | 58 | 5 | 19 | 45 | 343 | 35 | 30 | 343 | 30 | 54 | —4 | 36 |
| *Cent.* | 3 | 12 | 19 | 32 | 11 | 20 | 52 | 6 | 4 | 17 | 358 | 15 | 15 | 358 | 11 | 7 | —4 | 8 |
| | 4 | 13 | 13 | 46 | 11 | 21 | 46 | 6 | 18 | 51 | 12 | 50 | 20 | 12 | 47 | 8 | —3 | 12 |
| | 6 | 14 | 59 | 14 | 11 | 23 | 34 | 7 | 17 | 30 | 41 | 15 | 0 | 41 | 12 | 36 | —2 | 24 |
| | 7 | 15 | 53 | 13 | 11 | 24 | 28 | 8 | 1 | 24 | 55 | 46 | 0 | 55 | 42 | 55 | —3 | 5 |
| | 8 | 16 | 48 | 19 | 11 | 25 | 22 | 8 | 14 | 56 | 70 | 34 | 0 | 70 | 30 | 26 | —3 | 34 |
| | 10 | 18 | 39 | 26 | 11 | 27 | 11 | 9 | 10 | 45 | 100 | 23 | 30 | 100 | 20 | 15 | —3 | 15 |
| | 11 | 19 | 33 | 14 | 11 | 28 | 5 | 9 | 23 | 2 | 114 | 52 | 0 | 114 | 49 | 37 | —2 | 23 |
| | 12 | 20 | 24 | 29 | 11 | 28 | 59 | 10 | 4 | 56 | 128 | 42 | 0 | 128 | 40 | 59 | —1 | 1 |

# *LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

Anno JULIANO MDCCXXIII. Currente.

| *Transitus Limbi Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Distantia ☾ à ☉* | | | *Ascens. Rect. Limbi Lunæ Observata.* | | | *Ascens. Rect. Limbi Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Sept.* | 13 | 21 | 12 | 42 | 11 | 29 | 53 | 10 | 16 | 30 | 141 | 46 | 15 | 141 | 46 | 54 | +0 | 39 |
| :: | 14 | 21 | 57 | 55 | 0 | 0 | 47 | 10 | 27 | 49 | 154 | 5 | 30 | 154 | 7 | 51 | +2 | 21 |
| :: | 20 | 1 | 19 | 47 | 0 | 5 | 16 | 0 | 22 | 46 | 209 | 37 | 30 | 209 | 40 | 53 | +3 | 23 |
| | 23 | 3 | 34 | 11 | 0 | 7 | 58 | 1 | 27 | 5 | 246 | 16 | 30 | 246 | 21 | 20 | +4 | 50 |
| | 24 | 4 | 25 | 20 | 0 | 8 | 53 | 2 | 9 | 9 | 260 | 5 | 0 | 260 | 9 | 39 | +4 | 39 |
| | 25 | 5 | 19 | 41 | 0 | 9 | 47 | 2 | 21 | 38 | 274 | 41 | 30 | 274 | 45 | 38 | +4 | 8 |
| | 26 | 6 | 16 | 21 | 0 | 10 | 42 | 3 | 4 | 32 | 289 | 53 | 0 | 289 | 56 | 0 | +3 | 0 |
| | 27 | 7 | 14 | 3 | 0 | 11 | 37 | 3 | 17 | 52 | 305 | 20 | 0 | 305 | 20 | 19 | +0 | 19 |
| :: | 28 | 8 | 11 | 17 | 0 | 12 | 32 | 4 | 1 | 35 | 320 | 40 | 0 | 320 | 38 | 16 | −1 | 44 |
| | 29 | 9 | 7 | 13 | 0 | 13 | 26 | 4 | 15 | 39 | 335 | 40 | 20 | 335 | 36 | 7 | −4 | 13 |
| *Sept.* | 30 | 10 | 1 | 30 | 0 | 14 | 21 | 4 | 29 | 58 | 350 | 16 | 0 | 350 | 11 | 34 | −4 | 26 |
| *Octo.* | 1 | 10 | 54 | 38 | 0 | 15 | 16 | 5 | 14 | 25 | 4 | 34 | 30 | 4 | 29 | 31 | −4 | 59 |
| *Cent.* | 2 | 11 | 48 | 40 | 0 | 16 | 11 | 5 | 28 | 56 | 19 | 6 | 15 | 19 | 1 | 32 | −4 | 43 |
| *Cent.* :: | 3 | 12 | 42 | 13 | 0 | 17 | 6 | 6 | 13 | 21 | :: 33 | 31 | 0 | 33 | 25 | 42 | −5 | 18 |
| | 4 | 13 | 38 | 12 | 0 | 18 | 0 | 6 | 27 | 36 | 48 | 32 | 0 | 48 | 28 | 15 | −3 | 45 |
| :: | 5 | 14 | 34 | 50 | 0 | 18 | 56 | 7 | 11 | 32 | 63 | 43 | 0 | 63 | 38 | 52 | −4 | 8 |
| | 6 | 15 | 32 | 21 | 0 | 19 | 51 | 7 | 25 | 7 | 79 | 9 | 40 | 79 | 5 | 37 | −4 | 3 |
| :: | 7 | 16 | 30 | 10 | 0 | 20 | 46 | 8 | 8 | 18 | 94 | 36 | 0 | 94 | 32 | 18 | −3 | 42 |
| :: | 8 | 17 | 26 | 20 | 0 | 21 | 41 | 8 | 21 | 3 | 109 | 40 | 0 | 109 | 36 | 26 | −3 | 34 |
| | 9 | 18 | 19 | 45 | 0 | 22 | 36 | 9 | 3 | 23 | 124 | 2 | 30 | 123 | 58 | 50 | −3 | 40 |
| | 10 | 19 | 9 | 40 | 0 | 23 | 30 | 9 | 15 | 21 | 137 | 32 | 30 | 137 | 29 | 34 | −2 | 56 |
| | 12 | 20 | 39 | 36 | 0 | 25 | 20 | 10 | 8 | 21 | 162 | 03 | 30 | 162 | 3 | 10 | −0 | 20 |
| | 13 | 21 | 20 | 55 | 0 | 26 | 15 | 10 | 19 | 31 | 173 | 24 | 0 | 173 | 25 | 0 | +1 | 0 |
| | 14 | 22 | 0 | 58 | 0 | 27 | 9 | 11 | 0 | 34 | 184 | 25 | 30 | 184 | 26 | 57 | +1 | 27 |
| *Octo.* | 21 | 2 | 21 | 52 | 1 | 2 | 38 | 1 | 8 | 8 | 255 | 44 | 40 | 255 | 48 | 0 | +3 | 20 |
| | 22 | 3 | 15 | 10 | 1 | 3 | 34 | 1 | 20 | 14 | 270 | 5 | 30 | 270 | 9 | 29 | +4 | 0 |
| | 24 | 5 | 7 | 0 | 1 | 5 | 25 | 2 | 15 | 33 | 300 | 5 | 50 | 300 | 9 | 11 | +3 | 21 |
| | 25 | 6 | 2 | 51 | 1 | 6 | 20 | 2 | 28 | 46 | 315 | 5 | 0 | 315 | 6 | 21 | +1 | 21 |
| :: | 26 | 6 | 57 | 3 | 1 | 7 | 16 | 3 | 12 | 19 | 329 | 39 | 30 | 329 | 40 | 21 | +0 | 51 |
| :: | 27 | 7 | 49 | 56 | 1 | 8 | 11 | 3 | 26 | 12 | 343 | 54 | 0 | 343 | 51 | 36 | −2 | 24 |
| :: | 28 | 8 | 41 | 2 | 1 | 9 | 6 | 4 | 10 | 17 | 357 | 46 | 0 | 357 | 43 | 30 | −2 | 30 |
| | 29 | 9 | 32 | 27 | 1 | 10 | 2 | 4 | 24 | 31 | 11 | 34 | 30 | 11 | 30 | 43 | −3 | 47 |
| | 30 | 10 | 24 | 19 | 1 | 10 | 57 | 5 | 8 | 47 | 25 | 33 | 30 | 25 | 29 | 26 | −4 | 4 |
| *Cent.* | 31 | 11 | 19 | 2 | 1 | 11 | 53 | 5 | 23 | 0 | 40 | 15 | 30 | 40 | 11 | 56 | −3 | 34 |

# *LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

## Anno JULIANO MDCCXXIII. Currente.

| *Transitûs Limbi Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Distantia ☾ à ☉* | | | *Ascens. Rect. Limbi Lunæ Observata.* | | | *Ascens. Rect. Limbi Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ″ | ‴ |
| *Cent.* | 1 | 12 | 15 | 0 | 1 | 12 | 48 | 6 | 7 | 3 | 55 | 16 | 15 | 55 | 12 | 43 | —3 | 32 |
| *Cent.* | 2 | 13 | 13 | 11 | 1 | 13 | 44 | 6 | 20 | 51 | 70 | 50 | 50 | 70 | 47 | 40 | —3 | 10 |
| *Nov.* | 3 | 14 | 13 | 56 | 1 | 14 | 40 | 7 | 4 | 20 | 87 | 3 | 10 | 86 | 59 | 26 | —3 | 44 |
| | 4 | 15 | 12 | 51 | 1 | 15 | 36 | 7 | 17 | 27 | 102 | 49 | 0 | 102 | 45 | 58 | —3 | 2 |
| | 6 | 17 | 2 | 17 | 1 | 17 | 27 | 8 | 12 | 32 | 132 | 13 | 15 | 132 | 9 | 30 | —3 | 45 |
| | 7 | 17 | 51 | 3 | 1 | 18 | 23 | 8 | 24 | 32 | 145 | 26 | 0 | 145 | 23 | 14 | —2 | 46 |
| | 8 | 18 | 36 | 11 | 1 | 19 | 18 | 9 | 6 | 14 | 157 | 44 | 0 | 157 | 42 | 1 | —1 | 59 |
| | 9 | 19 | 18 | 27 | 1 | 20 | 14 | 9 | 17 | 42 | 169 | 19 | 0 | 169 | 18 | 5 | —0 | 55 |
| | 13 | 21 | 59 | 43 | 1 | 23 | 55 | 11 | 2 | 34 | 213 | 41 | 0 | 213 | 41 | 42 | +0 | 42 |
| | 20 | 3 | 2 | 50 | 1 | 29 | 29 | 1 | 13 | 52 | 295 | 34 | 20 | 295 | 35 | 15 | +0 | 55 |
| | 24 | 6 | 35 | 31 | 2 | 3 | 13 | 3 | 7 | 12 | 352 | 50 | 30 | 352 | 48 | 40 | —1 | 50 |
| | 25 | 7 | 24 | 46 | 2 | 4 | 9 | 3 | 21 | 7 | 06 | 10 | 30 | 6 | 9 | 9 | —1 | 21 |
| | 26 | 8 | 14 | 8 | 2 | 5 | 5 | 4 | 5 | 6 | 19 | 32 | 0 | 19 | 30 | 19 | —1 | 41 |
| : : | 28 | 9 | 58 | 3 | 2 | 6 | 57 | 5 | 2 | 56 | 47 | 33 | 20 | 47 | 31 | 0 | —2 | 20 |
| *Cent.* | 29 | 10 | 55 | 15 | 2 | 7 | 53 | 5 | 16 | 40 | 62 | 53 | 0 | 62 | 51 | 56 | —1 | 4 |
| *Cent.* | 30 | 11 | 53 | 53 | 2 | 8 | 49 | 6 | 0 | 10 | 78 | 34 | 0 | 78 | 33 | 29 | —0 | 31 |
| *Cent.* | 1 | 12 | 53 | 45 | 2 | 9 | 46 | 6 | 13 | 22 | 94 | 33 | 35 | 94 | 32 | 13 | —1 | 22 |
| *Dec.* | 2 | 13 | 53 | 50 | 2 | 10 | 42 | 6 | 26 | 15 | 110 | 36 | 15 | 110 | 34 | 50 | —1 | 25 |
| | 3 | 14 | 49 | 43 | 2 | 11 | 38 | 7 | 8 | 47 | 125 | 36 | 0 | 125 | 34 | 30 | —1 | 30 |
| | 5 | 16 | 29 | 15 | 2 | 13 | 30 | 8 | 2 | 55 | 152 | 31 | 15 | 152 | 29 | 43 | —1 | 32 |
| | 6 | 17 | 13 | 22 | 2 | 14 | 26 | 8 | 14 | 36 | 164 | 34 | 0 | 164 | 32 | 33 | —1 | 27 |
| | 7 | 17 | 54 | 54 | 2 | 15 | 22 | 8 | 26 | 6 | 175 | 58 | 0 | 175 | 56 | 16 | —1 | 44 |
| | 8 | 18 | 34 | 55 | 2 | 16 | 17 | 9 | 7 | 30 | 186 | 59 | 0 | 186 | 57 | 25 | —1 | 35 |
| | 9 | 19 | 14 | 32 | 2 | 17 | 13 | 9 | 18 | 49 | 197 | 54 | 0 | 197 | 53 | 0 | —1 | 0 |
| | 11 | 20 | 37 | 7 | 2 | 19 | 4 | 10 | 11 | 34 | 220 | 34 | 30 | 220 | 33 | 13 | —1 | 17 |
| : : | 24 | 6 | 59 | 42 | 3 | 0 | 17 | 3 | 16 | 16 | 28 | 28 | 30 | 28 | 27 | 26 | —1 | 4 |
| : : : : | 26 | 8 | 43 | 34 | 3 | 2 | 10 | 4 | 13 | 36 | 56 | 29 | 0 | 56 | 26 | 25 | —2 | 35 |
| : : | 27 | 9 | 39 | 30 | 3 | 3 | 6 | 4 | 26 | 53 | 71 | 29 | 30 | 71 | 28 | 27 | —1 | 3 |
| *Dec.* | 28 | 10 | 37 | 41 | 3 | 4 | 2 | 5 | 10 | 7 | 87 | 3 | 40 | 87 | 3 | 3 | —0 | 37 |
| *Cent.* | 30 | 12 | 34 | 46 | 3 | 5 | 55 | 6 | 5 | 30 | 118 | 23 | 20 | 118 | 23 | 19 | —0 | 1 |

## Anno JULIANO MDCCXXIV. Currente.

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Jan.* | 6 | 17 | 49 | 40 | 3 | 12 | 25 | 8 | 26 | 58 | 204 | 13 | 20 | 204 | 12 | 36 | —0 | 44 |

# LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

## Anno JULIANO MDCCXXIV. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Ascens. Rect. Limbi Lunæ Observata. | | | Ascens. Rect. Limbi Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| Jan. | 17 | 2 | 27 | 6 | 3 | 21 | 44 | 1 | 2 | 4 | 343 | 47 | 40 | 343 | 46 | 26 | —1 | 14 |
| | 21 | 5 | 47 | 26 | 3 | 25 | 27 | 2 | 27 | 42 | 37 | 57 | 20 | 37 | 55 | 40 | —1 | 40 |
| | 22 | 6 | 39 | 25 | 3 | 26 | 23 | 3 | 11 | 24 | 51 | 58 | 30 | 51 | 55 | 45 | —2 | 45 |
| | 24 | 8 | 29 | 54 | 3 | 28 | 15 | 4 | 8 | 1 | 81 | 38 | 20 | 81 | 37 | 49 | —0 | 31 |
| | 25 | 9 | 27 | 24 | 3 | 29 | 11 | 4 | 20 | 53 | 97 | 2 | 20 | 97 | 1 | 1 | —1 | 19 |
| | 26 | 10 | 24 | 8 | 4 | 0 | 7 | 5 | 3 | 25 | 112 | 15 | 0 | 112 | 14 | 33 | —0 | 27 |
| Cent. | 27 | 11 | 19 | 44 | 4 | 1 | 3 | 5 | 15 | 38 | 127 | 10 | 30 | 127 | 11 | 7 | +0 | 37 |
| Cent. | 28 | 12 | 10 | 50 | 4 | 1 | 58 | 5 | 27 | 32 | 140 | 58 | 20 | 140 | 58 | 28 | +0 | 8 |
| | 30 | 13 | 43 | 40 | 4 | 3 | 50 | 6 | 20 | 36 | 166 | 12 | 0 | 166 | 11 | 26 | —0 | 34 |
| Jan. | 31 | 14 | 25 | 22 | 4 | 4 | 45 | 7 | 1 | 51 | 177 | 39 | 0 | 177 | 38 | 18 | —0 | 42 |
| Feb. | 2 | 15 | 45 | 24 | 4 | 6 | 35 | 7 | 24 | 16 | 199 | 41 | 5 | 199 | 39 | 15 | —1 | 15 |
| | 3 | 16 | 25 | 43 | 4 | 7 | 30 | 8 | 5 | 30 | 210 | 46 | 45 | 210 | 45 | 37 | —1 | 8 |
| | 4 | 17 | 7 | 34 | 4 | 8 | 25 | 8 | 16 | 52 | 222 | 15 | 0 | 222 | 14 | 14 | —0 | 46 |
| | 7 | 19 | 31 | 11 | 4 | 11 | 11 | 9 | 22 | 20 | 261 | 13 | 0 | 261 | 11 | 27 | —1 | 33 |
| | 15 | 1 | 58 | 56 | 4 | 17 | 39 | 0 | 26 | 30 | 05 | 19 | 0 | 5 | 19 | 9 | +0 | 9 |
| | 16 | 2 | 50 | 9 | 4 | 18 | 35 | 1 | 10 | 45 | 19 | 8 | 30 | 19 | 8 | 51 | +0 | 21 |
| | 18 | 4 | 34 | 35 | 4 | 20 | 25 | 2 | 9 | 0 | 47 | 17 | 30 | 47 | 16 | 8 | —1 | 22 |
| | 19 | 5 | 29 | 13 | 4 | 21 | 20 | 2 | 22 | 47 | 61 | 58 | 30 | 61 | 56 | 18 | —2 | 12 |
| | 20 | 6 | 25 | 37 | 4 | 22 | 15 | 3 | 6 | 16 | 77 | 5 | 45 | 77 | 2 | 40 | —3 | 5 |
| : : | 21 | 7 | 22 | 48 | 4 | 23 | 11 | 3 | 19 | 24 | 92 | 25 | 0 | 92 | 22 | 32 | —2 | 28 |
| | 22 | 8 | 19 | 30 | 4 | 24 | 6 | 4 | 2 | 9 | 107 | 37 | 0 | 107 | 34 | 15 | —2 | 45 |
| | 23 | 9 | 14 | 4 | 4 | 25 | 1 | 4 | 14 | 31 | 122 | 17 | 0 | 122 | 15 | 29 | —1 | 31 |
| | 24 | 10 | 5 | 31 | 4 | 25 | 56 | 4 | 26 | 31 | 136 | 10 | 0 | 136 | 9 | 0 | —1 | 0 |
| | 25 | 10 | 53 | 29 | 4 | 26 | 51 | 5 | 8 | 12 | 149 | 10 | 30 | 149 | 10 | 22 | —0 | 8 |
| | 26 | 11 | 38 | 18 | 4 | 27 | 46 | 5 | 19 | 37 | 161 | 23 | 40 | 161 | 23 | 14 | —0 | 26 |
| Feb. | 28 | 13 | 3 | 9 | 4 | 29 | 35 | 6 | 11 | 55 | 184 | 38 | 10 | 184 | 36 | 47 | —1 | 23 |
| Mart. | 3 | 15 | 47 | 8 | 5 | 3 | 12 | 7 | 26 | 18 | 229 | 41 | 20 | 229 | 38 | 5 | —3 | 15 |
| | 6 | 18 | 14 | 34 | 5 | 5 | 56 | 9 | 1 | 36 | 269 | 36 | 20 | 269 | 32 | 38 | —3 | 42 |
| | 8 | 20 | 6 | 21 | 5 | 7 | 46 | 9 | 26 | 57 | 299 | 36 | 0 | 299 | 31 | 38 | —4 | 22 |
| | 9 | 21 | 3 | 6 | 5 | 8 | 41 | 10 | 10 | 15 | 314 | 49 | 0 | 314 | 44 | 36 | —4 | 24 |
| : : | 17 | 3 | 18 | 55 | 5 | 15 | 2 | 1 | 19 | 50 | 55 | 55 | 20 | 55 | 58 | 6 | +2 | 46 |
| | 18 | 4 | 16 | 56 | 5 | 15 | 57 | 2 | 3 | 49 | 71 | 27 | 0 | 71 | 28 | 21 | +1 | 21 |
| : : | 20 | 6 | 14 | 17 | 5 | 17 | 46 | 3 | 0 | 39 | 102 | 50 | 30 | 102 | 49 | 12 | —1 | 18 |
| | 21 | 7 | 10 | 20 | 5 | 18 | 40 | 3 | 13 | 26 | 117 | 52 | 30 | 117 | 51 | 13 | —1 | 17 |

# *LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

Anno JULIANO MDCCXXIV. Currente.

| *Transitûs Limbi Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Distantia ☾ à ☉* | | | *Ascens. Rect. Limbi Lunæ Observata.* | | | *Ascens. Rect. Limbi Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Mart.* | 22 | 8 | 2 | 58 | 5 | 19 | 35 | 3 | 25 | 46 | 132 | 3 | 30 | 132 | 1 | 47 | —1 | 43 |
| | 23 | 8 | 51 | 50 | 5 | 20 | 29 | 4 | 7 | 44 | 145 | 17 | 30 | 145 | 17 | 5 | —0 | 25 |
| | 24 | 9 | 37 | 10 | 5 | 21 | 23 | 4 | 19 | 21 | 157 | 38 | 30 | 157 | 38 | 43 | +0 | 13 |
| *Cent.* | 27 | 11 | 41 | 5 | 5 | 24 | 4 | 5 | 22 | 50 | 191 | 39 | 45 | 191 | 39 | 21 | —0 | 24 |
| | 29 | 13 | 2 | 27 | 5 | 25 | 51 | 6 | 14 | 43 | 214 | 2 | 0 | 213 | 58 | 32 | —3 | 28 |
| | 30 | 13 | 44 | 50 | 5 | 26 | 45 | 6 | 25 | 44 | 225 | 38 | 30 | 225 | 34 | 0 | —4 | 30 |
| *Mart.* | 31 | 14 | 29 | 42 | 5 | 27 | 38 | 7 | 6 | 55 | 237 | 52 | 30 | 237 | 47 | 5 | —5 | 25 |
| *Apri.* | 1 | 15 | 17 | 30 | 5 | 28 | 32 | 7 | 18 | 19 | 250 | 50 | 30 | 250 | 44 | 46 | —5 | 44 |
| | 5 | 18 | 51 | 36 | 6 | 2 | 7 | 9 | 7 | 17 | 308 | 27 | 30 | 308 | 21 | 12 | —6 | 18 |
| | 14 | 2 | 0 | 45 | 6 | 9 | 18 | 1 | 0 | 23 | 63 | 55 | 20 | 63 | 57 | 25 | +2 | 5 |
| | 15 | 3 | 1 | 38 | 6 | 10 | 12 | 1 | 14 | 29 | 80 | 10 | 20 | 80 | 13 | 0 | +2 | 40 |
| :: | 18 | 5 | 57 | 26 | 6 | 12 | 53 | 2 | 24 | 23 | 127 | 12 | 0 | 127 | 13 | 46 | +1 | 46 |
| | 20 | 7 | 35 | 28 | 6 | 14 | 40 | 3 | 18 | 50 | 153 | 44 | 50 | 153 | 46 | 18 | +1 | 28 |
| | 21 | 8 | 18 | 59 | 6 | 15 | 33 | 4 | 0 | 31 | 165 | 38 | 30 | 165 | 39 | 55 | +1 | 25 |
| :: | 22 | 9 | 0 | 3 | 6 | 16 | 26 | 4 | 11 | 55 | 176 | 55 | 20 | 176 | 57 | 13 | +1 | 53 |
| | 24 | 10 | 19 | 16 | 6 | 18 | 12 | 5 | 4 | 9 | 198 | 45 | 0 | 198 | 45 | 45 | +0 | 45 |
| | 25 | 10 | 59 | 25 | 6 | 19 | 5 | 5 | 15 | 9 | 209 | 48 | 0 | 209 | 47 | 25 | —0 | 35 |
| *Cent.* | 27 | 12 | 26 | 20 | 6 | 20 | 51 | 6 | 7 | 14 | 233 | 33 | 30 | 233 | 29 | 58 | —3 | 32 |
| *Cent.* | 28 | 13 | 13 | 22 | 6 | 21 | 44 | 6 | 18 | 28 | 246 | 20 | 15 | 246 | 15 | 14 | —5 | 1 |
| | 29 | 14 | 4 | 34 | 6 | 22 | 37 | 6 | 29 | 55 | 260 | 9 | 30 | 260 | 3 | 49 | —5 | 41 |
| *April.* | 30 | 14 | 57 | 15 | 6 | 23 | 30 | 7 | 11 | 38 | 274 | 21 | 0 | 274 | 14 | 40 | —6 | 20 |
| *Maii.* | 2 | 16 | 45 | 53 | 6 | 25 | 17 | 8 | 6 | 5 | 303 | 33 | 20 | 303 | 26 | 36 | —6 | 44 |
| | 4 | 18 | 31 | 19 | 6 | 27 | 3 | 9 | 2 | 2 | 331 | 57 | 30 | 331 | 50 | 17 | —7 | 13 |
| :: | 6 | 20 | 11 | 27 | 6 | 28 | 49 | 9 | 29 | 27 | 359 | 1 | 40 | 358 | 54 | 11 | —7 | 29 |
| | 7 | 21 | 1 | 15 | 6 | 29 | 42 | 10 | 13 | 36 | 12 | 30 | 0 | 12 | 23 | 2 | —6 | 58 |
| | 11 | 5 | 11 | 22 | 7 | 2 | 33 | 0 | 0 | 0 | ♊ 1 | 37 | 3 | ♊ 1 | 36 | 21 | —0 | 42 |
| | 14 | 2 | 46 | 33 | 7 | 5 | 1 | 1 | 8 | 50 | 104 | 58 | 30 | 105 | 1 | 2 | +2 | 32 |
| | 15 | 3 | 45 | 42 | 7 | 5 | 54 | 1 | 22 | 9 | 120 | 47 | 20 | 120 | 51 | 2 | +3 | 42 |
| | 16 | 4 | 40 | 19 | 7 | 6 | 47 | 2 | 5 | 1 | 135 | 28 | 15 | 135 | 31 | 35 | +3 | 20 |
| | 17 | 5 | 30 | 10 | 7 | 7 | 40 | 2 | 17 | 29 | 148 | 57 | 0 | 148 | 59 | 39 | +2 | 39 |
| | 19 | 6 | 58 | 6 | 7 | 9 | 26 | 3 | 11 | 20 | 172 | 57 | 50 | 173 | 0 | 20 | +2 | 30 |
| | 21 | 8 | 18 | 0 | 7 | 11 | 10 | 4 | 4 | 10 | 194 | 57 | 45 | 194 | 59 | 45 | +2 | 0 |
| | 22 | 8 | 57 | 45 | 7 | 12 | 3 | 4 | 15 | 22 | 205 | 54 | 50 | 205 | 56 | 57 | +2 | 7 |
| | 23 | 9 | 38 | 50 | 7 | 12 | 55 | 4 | 26 | 32 | 217 | 12 | 0 | 217 | 13 | 7 | +1 | 7 |

# *LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

Anno JULIANO MDCCXXIV. Currente.

| *Transitûs Limbi Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Distantia ☾ à ☉* | | | *Ascens. Rect. Limbi Lunæ Observata.* | | | *Ascens. Rect. Limbi Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Maii.* | 25 | 11 | 9 | 29 | 7 | 14 | 40 | 5 | 18 | 59 | 241 | 53 | 40 | 241 | 51 | 47 | —1 | 53 |
| *Cent.* | 26 | 11 | 58 | 58 | 7 | 15 | 33 | 6 | 0 | 24 | 255 | 17 | 0 | 255 | 13 | 52 | —3 | 8 |
| | 27 | 12 | 51 | 22 | 7 | 16 | 26 | 6 | 12 | 2 | 269 | 24 | 30 | 269 | 20 | 18 | —4 | 12 |
| | 28 | 13 | 46 | 59 | 7 | 17 | 19 | 6 | 23 | 56 | 284 | 20 | 0 | 284 | 14 | 51 | —5 | 9 |
| | 29 | 14 | 41 | 55 | 7 | 18 | 12 | 7 | 6 | 7 | 299 | 5 | 20 | 298 | 59 | 40 | —5 | 40 |
| *Maii.* | 30 | 15 | 35 | 54 | 7 | 19 | 4 | 7 | 18 | 37 | 313 | 36 | 30 | 313 | 30 | 45 | —5 | 45 |
| *Junii.* | 1 | 17 | 18 | 10 | 7 | 20 | 50 | 8 | 14 | 38 | 341 | 13 | 0 | 341 | 7 | 31 | —5 | 29 |
| | 2 | 18 | 6 | 47 | 7 | 21 | 42 | 8 | 28 | 6 | 354 | 23 | 30 | 354 | 16 | 41 | —6 | 49 |
| | 4 | 19 | 43 | 42 | 7 | 23 | 28 | 9 | 25 | 52 | 20 | 39 | 30 | 20 | 32 | 10 | —7 | 20 |
| | 6 | 21 | 28 | 38 | 7 | 25 | 13 | 10 | 24 | 14 | 48 | 56 | 00 | 48 | 49 | 58 | —6 | 2 |
| | 7 | 22 | 26 | 29 | 7 | 26 | 6 | 11 | 8 | 24 | 64 | 25 | 15 | 64 | 21 | 0 | —4 | 15 |
| | 13 | 3 | 20 | 15 | 8 | 0 | 31 | 1 | 15 | 33 | 142 | 59 | 30 | 143 | 2 | 25 | +2 | 55 |
| | 16 | 5 | 34 | 53 | 8 | 3 | 8 | 2 | 21 | 47 | 179 | 42 | 0 | 179 | 43 | 37 | +1 | 37 |
| | 17 | 6 | 15 | 0 | 8 | 4 | 0 | 3 | 3 | 22 | 190 | 44 | 15 | 190 | 46 | 11 | +1 | 56 |
| | 19 | 7 | 35 | 14 | 8 | 5 | 45 | 3 | 26 | 10 | 212 | 49 | 30 | 212 | 51 | 35 | +2 | 5 |
| | 20 | 8 | 17 | 32 | 8 | 6 | 37 | 4 | 7 | 31 | 224 | 25 | 0 | 224 | 27 | 9 | +2 | 9 |
| | 21 | 9 | 2 | 38 | 8 | 7 | 29 | 4 | 18 | 55 | 236 | 42 | 20 | 236 | 43 | 10 | +0 | 50 |
| | 23 | 10 | 42 | 42 | 8 | 9 | 14 | 5 | 12 | 7 | 263 | 45 | 45 | 263 | 44 | 29 | —1 | 16 |
| *Cent.* | 24 | 11 | 38 | 17 | 8 | 10 | 7 | 5 | 24 | 3 | 278 | 41 | 0 | 278 | 38 | 53 | —2 | 7 |
| *Cent.* | 25 | 12 | 34 | 0 | 8 | 11 | 0 | 6 | 6 | 13 | 293 | 38 | 0 | 293 | 34 | 54 | —3 | 6 |
| : : | 26 | 13 | 30 | 34 | 8 | 11 | 53 | 6 | 18 | 40 | 308 | 48 | 0 | 308 | 44 | 34 | —3 | 26 |
| | 27 | 14 | 24 | 12 | 8 | 12 | 46 | 7 | 1 | 24 | 323 | 13 | 50 | 323 | 9 | 18 | —4 | 32 |
| | 29 | 16 | 4 | 40 | 8 | 14 | 31 | 7 | 27 | 45 | 350 | 23 | 30 | 350 | 19 | 32 | —3 | 58 |
| *Jun.* | : : | 30 | 16 | 52 | 40 | 8 | 15 | 23 | 8 | 11 | 19 | 3 | 24 | 30 | 3 | 21 | 36 | —2 | 54 |
| *Julii.* | 2 | 18 | 29 | 33 | 8 | 17 | 9 | 9 | 8 | 59 | 29 | 40 | 0 | 29 | 34 | 2 | —5 | 58 |
| | 3 | 19 | 21 | 0 | 8 | 18 | 1 | 9 | 22 | 58 | 43 | 33 | 0 | 43 | 26 | 55 | —6 | 5 |
| | 4 | 20 | 15 | 48 | 8 | 18 | 54 | 10 | 6 | 57 | 58 | 16 | 30 | 58 | 10 | 8 | —6 | 22 |
| : : | 13 | 3 | 29 | 15 | 8 | 25 | 57 | 1 | 20 | 22 | 174 | 49 | 0 | 174 | 49 | 16 | +0 | 16 |
| | 14 | 4 | 10 | 20 | 8 | 26 | 49 | 2 | 2 | 3 | 186 | 6 | 0 | 186 | 7 | 8 | +1 | 8 |
| | 16 | 5 | 30 | 42 | 8 | 28 | 34 | 2 | 25 | 2 | 208 | 13 | 20 | 208 | 14 | 41 | +1 | 21 |
| | 23 | 11 | 17 | 56 | 9 | 4 | 44 | 5 | 17 | 55 | 302 | 10 | 0 | 302 | 7 | 22 | —2 | 38 |
| *Cent.* | 24 | 12 | 14 | 28 | 9 | 5 | 37 | 6 | 0 | 42 | 317 | 19 | 30 | 317 | 15 | 55 | —3 | 35 |
| | 26 | 14 | 0 | 1 | 9 | 7 | 23 | 6 | 27 | 6 | 345 | 45 | 20 | 345 | 42 | 30 | —2 | 50 |
| | 27 | 14 | 49 | 21 | 9 | 8 | 16 | 7 | 10 | 40 | 359 | 6 | 30 | 359 | 4 | 16 | —2 | 14 |

# LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIV. Currente.

| Transitûs Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Ascens. Rect. Limbi Lunæ Observata. | | | Ascens. Rect. Limbi Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ″ | ″ |
| *Julii.* | 28 | 15 | 38 | 0 | 9 | 9 | 9 | 7 | 24 | 27 | 12 | 17 | 0 | 12 | 14 | 39 | −2 | 21 |
| *Aug.* | 2 | 20 | 6 | 12 | 9 | 13 | 35 | 10 | 3 | 45 | 84 | 27 | 0 | 84 | 23 | 26 | −3 | 34 |
| | 3 | 21 | 6 | 10 | 9 | 14 | 28 | 10 | 17 | 10 | 100 | 28 | 0 | 100 | 25 | 48 | −2 | 12 |
| | 11 | 2 | 45 | 58 | 9 | 20 | 40 | 1 | 12 | 26 | 192 | 33 | 0 | 192 | 33 | 34 | +0 | 34 |
| | 17 | 7 | 14 | 24 | 9 | 25 | 58 | 3 | 21 | 26 | 265 | 45 | 30 | 265 | 45 | 48 | +0 | 18 |
| | 18 | 8 | 8 | 30 | 9 | 26 | 52 | 4 | 3 | 33 | 280 | 18 | 15 | 280 | 17 | 20 | −0 | 55 |
| | 19 | 9 | 4 | 10 | 9 | 27 | 46 | 4 | 15 | 58 | 295 | 14 | 30 | 295 | 12 | 7 | −2 | 23 |
| | 20 | 9 | 59 | 52 | 9 | 28 | 39 | 4 | 28 | 43 | 310 | 11 | 30 | 310 | 8 | 12 | −3 | 18 |
| | 21 | 10 | 54 | 26 | 9 | 29 | 33 | 5 | 11 | 47 | 324 | 51 | 30 | 324 | 47 | 27 | −4 | 3 |
| *Cent.* | 22 | 11 | 48 | 25 | 10 | 0 | 26 | 5 | 25 | 10 | 339 | 22 | 30 | 339 | 18 | 11 | −4 | 19 |
| | 24 | 13 | 30 | 50 | 10 | 2 | 14 | 6 | 22 | 44 | 7 | 1 | 20 | 6 | 58 | 17 | −3 | 3 |
| | 26 | 15 | 12 | 27 | 10 | 4 | 1 | 7 | 20 | 57 | 34 | 28 | 0 | 34 | 27 | 26 | −0 | 34 |
| | 27 | 16 | 6 | 6 | 10 | 4 | 55 | 8 | 5 | 5 | 48 | 54 | 15 | 48 | 52 | 24 | −1 | 51 |
| | 29 | 18 | 1 | 0 | 10 | 6 | 42 | 9 | 2 | 58 | 79 | 40 | 30 | 79 | 38 | 28 | −2 | 2 |
| *Aug.* | 30 | 19 | 0 | 41 | 10 | 7 | 36 | 9 | 16 | 32 | 95 | 37 | 30 | 95 | 36 | 55 | −0 | 35 |
| *Sept.* | 1 | 20 | 55 | 36 | 10 | 9 | 24 | 10 | 12 | 36 | 126 | 24 | 0 | 126 | 24 | 40 | +0 | 40 |
| | 2 | 21 | 47 | 56 | 10 | 10 | 18 | 10 | 25 | 4 | 140 | 30 | 30 | 140 | 32 | 41 | +2 | 11 |
| | 10 | 2 | 45 | 22 | 10 | 16 | 34 | 1 | 15 | 20 | 221 | 58 | 0 | 221 | 59 | 50 | +1 | 50 |
| | 15 | 6 | 51 | 18 | 10 | 21 | 4 | 3 | 13 | 22 | 288 | 33 | 0 | 288 | 33 | 20 | +0 | 20 |
| | 17 | 8 | 40 | 0 | 10 | 22 | 53 | 4 | 8 | 41 | 317 | 46 | 30 | 317 | 42 | 49 | −3 | 41 |
| | 18 | 9 | 32 | 55 | 10 | 23 | 47 | 4 | 21 | 53 | 332 | 1 | 20 | 331 | 56 | 30 | −4 | 50 |
| *Cent.* | 20 | 11 | 16 | 30 | 10 | 25 | 36 | 5 | 19 | 22 | 359 | 57 | 40 | 359 | 52 | 47 | −4 | 53 |
| | 22 | 13 | 0 | 49 | 10 | 27 | 25 | 6 | 17 | 53 | 28 | 5 | 0 | 28 | 1 | 52 | −3 | 8 |
| | 23 | 13 | 55 | 18 | 10 | 28 | 20 | 7 | 2 | 18 | 42 | 43 | 30 | 42 | 41 | 22 | −2 | 8 |
| | 24 | 14 | 52 | 38 | 10 | 29 | 14 | 7 | 16 | 41 | 58 | 5 | 0 | 58 | 3 | 31 | −1 | 29 |
| | 26 | 16 | 53 | 49 | 11 | 1 | 4 | 8 | 14 | 51 | 90 | 26 | 0 | 90 | 24 | 31 | −1 | 29 |
| | 27 | 17 | 54 | 17 | 11 | 1 | 59 | 8 | 28 | 27 | 106 | 34 | 40 | 106 | 32 | 55 | −1 | 45 |
| *Sept.* | 28 | 18 | 51 | 53 | 11 | 2 | 54 | 9 | 11 | 38 | 122 | 0 | 10 | 121 | 58 | 32 | −1 | 38 |
| *Octo.* | 1 | 21 | 20 | 2 | 11 | 5 | 38 | 10 | 18 | 40 | 162 | 6 | 0 | 162 | 7 | 48 | +1 | 48 |
| | 8 | 1 | 26 | 0 | 11 | 11 | 4 | 0 | 25 | 44 | 229 | 40 | 0 | 229 | 41 | 50 | +1 | 50 |
| | 13 | 5 | 36 | 6 | 11 | 15 | 39 | 2 | 23 | 8 | 297 | 17 | 45 | 297 | 19 | 6 | +1 | 21 |
| | 14 | 6 | 28 | 50 | 11 | 16 | 34 | 3 | 5 | 31 | 311 | 30 | 0 | 311 | 30 | 51 | +0 | 51 |
| | 15 | 7 | 20 | 36 | 11 | 17 | 29 | 3 | 18 | 18 | 325 | 28 | 0 | 325 | 26 | 0 | −2 | 0 |
| | 17 | 9 | 0 | 49 | 11 | 19 | 19 | 4 | 15 | 4 | 352 | 33 | 30 | 352 | 29 | 22 | −4 | 8 |

# LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIV. Currente.

| Transitus Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Ascens. Rect. Limbi Lunæ Observata. | | | Ascens. Rect. Limbi Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| Octo. | 18 | 9 | 50 | 40 | 11 | 20 | 14 | 4 | 29 | 1 | 6 | 2 | 30 | 5 | 57 | 29 | −5 | 1 |
| | 19 | 10 | 41 | 46 | 11 | 21 | 9 | 5 | 13 | 15 | 19 | 50 | 20 | 19 | 45 | 11 | −5 | 9 |
| | 21 | 12 | 34 | 51 | 11 | 23 | 0 | 6 | 12 | 20 | 50 | 9 | 45 | 50 | 6 | 17 | −3 | 28 |
| | 22 | 13 | 35 | 35 | 11 | 23 | 55 | 6 | 26 | 53 | 66 | 22 | 0 | 66 | 20 | 28 | −1 | 32 |
| | 26 | 17 | 40 | 17 | 11 | 27 | 38 | 8 | 22 | 18 | 131 | 39 | 0 | 131 | 37 | 38 | −1 | 22 |
| | 27 | 18 | 31 | 52 | 11 | 28 | 34 | 9 | 5 | 5 | 145 | 34 | 0 | 145 | 32 | 6 | −1 | 54 |
| | 30 | 20 | 43 | 20 | 0 | 1 | 19 | 10 | 10 | 56 | 181 | 29 | 0 | 181 | 28 | 50 | −0 | 10 |
| Octo. | 31 | 21 | 23 | 12 | 0 | 2 | 14 | 10 | 22 | 14 | 192 | 27 | 45 | 192 | 27 | 37 | −0 | 8 |
| Nov. | 1 | 22 | 3 | 0 | 0 | 3 | 9 | 11 | 3 | 22 | 203 | 25 | 30 | 203 | 26 | 11 | +0 | 41 |
| | 8 | 2 | 38 | 23 | 0 | 8 | 42 | 1 | 9 | 42 | 278 | 22 | 30 | 278 | 22 | 42 | +0 | 12 |
| | 12 | 6 | 3 | 18 | 0 | 12 | 24 | 2 | 28 | 10 | 333 | 41 | 0 | 333 | 41 | 22 | +0 | 22 |
| | 15 | 8 | 27 | 22 | 0 | 15 | 12 | 4 | 8 | 31 | 12 | 45 | 30 | 12 | 43 | 26 | −2 | 4 |
| | 16 | 9 | 18 | 0 | 0 | 16 | 7 | 4 | 22 | 40 | 26 | 26 | 15 | 26 | 23 | 1 | −3 | 14 |
| | 17 | 10 | 12 | 6 | 0 | 17 | 3 | 5 | 7 | 4 | 40 | 59 | 0 | 40 | 55 | 51 | −3 | 9 |
| | 21 | 14 | 26 | 16 | 0 | 20 | 48 | 7 | 4 | 39 | 108 | 38 | 30 | 108 | 38 | 24 | −0 | 6 |
| | 22 | 15 | 27 | 27 | 0 | 21 | 45 | 7 | 18 | 22 | 124 | 57 | 50 | 124 | 57 | 5 | −0 | 45 |
| | 24 | 17 | 13 | 37 | 0 | 23 | 36 | 8 | 14 | 30 | 153 | 32 | 30 | 153 | 29 | 55 | −2 | 35 |
| | 25 | 17 | 59 | 19 | 0 | 24 | 32 | 8 | 26 | 53 | 165 | 59 | 30 | 165 | 56 | 27 | −3 | 3 |
| | 27 | 19 | 22 | 16 | 0 | 26 | 24 | 9 | 20 | 35 | 188 | 45 | 30 | 188 | 42 | 24 | −3 | 6 |
| Nov. | 28 | 20 | 2 | 3 | 0 | 27 | 19 | 10 | 2 | 0 | 199 | 43 | 0 | 199 | 40 | 37 | −2 | 23 |
| Dec. | 10 | 4 | 47 | 56 | 1 | 7 | 34 | 2 | 8 | 37 | 342 | 23 | 30 | 342 | 24 | 0 | +0 | 30 |
| | 11 | 5 | 34 | 16 | 1 | 8 | 30 | 2 | 21 | 36 | 354 | 59 | 20 | 355 | 0 | 19 | +0 | 59 |
| | 16 | 9 | 51 | 42 | 1 | 13 | 10 | 5 | 1 | 4 | 64 | 27 | 15 | 64 | 26 | 45 | −0 | 30 |
| Cent. | 18 | 12 | 1 | 47 | 1 | 15 | 3 | 5 | 29 | 34 | 99 | 2 | 0 | 99 | 3 | 1 | +1 | 1 |
| | 19 | 13 | 7 | 13 | 1 | 16 | 0 | 6 | 13 | 31 | 116 | 25 | 15 | 116 | 27 | 5 | +1 | 50 |
| | 20 | 14 | 7 | 11 | 1 | 16 | 56 | 6 | 27 | 6 | 132 | 26 | 15 | 132 | 27 | 25 | +1 | 10 |
| | 21 | 15 | 1 | 43 | 1 | 17 | 52 | 7 | 10 | 17 | 147 | 5 | 30 | 147 | 4 | 54 | −0 | 36 |
| | 22 | 15 | 50 | 55 | 1 | 18 | 49 | 7 | 23 | 4 | 160 | 25 | 0 | 160 | 24 | 10 | −0 | 50 |
| | 23 | 16 | 36 | 0 | 1 | 19 | 44 | 8 | 5 | 28 | 172 | 42 | 20 | 172 | 39 | 43 | −2 | 37 |
| : : | 24 | 17 | 18 | 16 | 1 | 20 | 40 | 8 | 17 | 31 | 184 | 17 | 20 | 184 | 13 | 22 | −3 | 58 |
| | 26 | 18 | 39 | 17 | 1 | 22 | 31 | 9 | 10 | 49 | 206 | 34 | 0 | 206 | 29 | 47 | −4 | 13 |
| | 27 | 19 | 20 | 35 | 1 | 23 | 27 | 9 | 22 | 11 | 217 | 54 | 15 | 217 | 50 | 3 | −4 | 12 |

# LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXV. Currente.

| | Transitus Limbi Lunæ T. æq. | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Ascens. Rect. Limbi Lunæ Observata. | | | Ascens. Rect. Limbi Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Jan.* | | 6 | 2 | 45 | 56 | 2 | 1 | 51 | 1 | 6 | 49 | 338 | 25 | 0 | 338 | 23 | 44 | −1 | 16 |
| | | 10 | 5 | 53 | 15 | 2 | 5 | 34 | 2 | 29 | 34 | 29 | 19 | 0 | 29 | 19 | 24 | +0 | 24 |
| | | 11 | 6 | 44 | 20 | 2 | 6 | 30 | 3 | 13 | 24 | 43 | 6 | 30 | 43 | 6 | 33 | +0 | 3 |
| | | 12 | 7 | 39 | 30 | 2 | 7 | 26 | 3 | 27 | 24 | 57 | 55 | 15 | 57 | 55 | 3 | −0 | 12 |
| *Cent.* | | 13 | 8 | 40 | 17 | 2 | 8 | 22 | 4 | 11 | 28 | 74 | 9 | 0 | 74 | 8 | 20 | −0 | 40 |
| | | 14 | 9 | 41 | 47 | 2 | 9 | 18 | 4 | 25 | 27 | 90 | 33 | 0 | 90 | 33 | 17 | +0 | 17 |
| | | 15 | 10 | 45 | 24 | 2 | 10 | 15 | 5 | 9 | 18 | 107 | 29 | 0 | 107 | 30 | 1 | +1 | 1 |
| | | 16 | 11 | 46 | 54 | 2 | 11 | 11 | 5 | 22 | 53 | 123 | 53 | 15 | 123 | 54 | 45 | +1 | 30 |
| | | 18 | 13 | 38 | 39 | 2 | 13 | 3 | 6 | 19 | 5 | 153 | 52 | 20 | 153 | 53 | 20 | +1 | 0 |
| | | 19 | 14 | 26 | 19 | 2 | 13 | 59 | 7 | 1 | 40 | 166 | 48 | 30 | 166 | 48 | 40 | +0 | 10 |
| :: | | 20 | 15 | 10 | 40 | 2 | 14 | 54 | 7 | 13 | 54 | 178 | 54 | 45 | 178 | 52 | 35 | −2 | 10 |
| | | 23 | 17 | 15 | 16 | 2 | 17 | 40 | 8 | 19 | 10 | 213 | 6 | 20 | 213 | 2 | 43 | −3 | 37 |
| | | 24 | 17 | 57 | 58 | 2 | 18 | 36 | 9 | 0 | 37 | 224 | 47 | 30 | 224 | 43 | 3 | −4 | 27 |
| :: | | 27 | 20 | 20 | 20 | 2 | 21 | 22 | 10 | 4 | 53 | 263 | 26 | 30 | 263 | 23 | 3 | −3 | 27 |
| *Jan.* | | 28 | 21 | 12 | 52 | 2 | 22 | 18 | 10 | 16 | 28 | 277 | 35 | 45 | 277 | 31 | 26 | −4 | 19 |
| *Feb.* | | 5 | 3 | 2 | 47 | 2 | 28 | 46 | 1 | 13 | 53 | 12 | 12 | 50 | 12 | 12 | 33 | −0 | 17 |
| :: | | 6 | 3 | 50 | 48 | 2 | 29 | 42 | 1 | 27 | 26 | 25 | 14 | 0 | 25 | 15 | 0 | +1 | 0 |
| | | 7 | 4 | 41 | 7 | 3 | 0 | 37 | 2 | 11 | 10 | 38 | 50 | 0 | 38 | 50 | 33 | +0 | 33 |
| | | 9 | 6 | 31 | 55 | 3 | 2 | 28 | 3 | 8 | 59 | 68 | 35 | 0 | 68 | 34 | 14 | −0 | 46 |
| | | 11 | 8 | 34 | 10 | 3 | 4 | 19 | 4 | 6 | 37 | 101 | 12 | 0 | 101 | 10 | 48 | −1 | 12 |
| | | 13 | 10 | 32 | 27 | 3 | 6 | 11 | 5 | 3 | 22 | 132 | 49 | 25 | 132 | 50 | 10 | +0 | 45 |
| *Cent.* | | 14 | 11 | 26 | 54 | 3 | 7 | 6 | 5 | 16 | 16 | 147 | 27 | 30 | 147 | 28 | 38 | +1 | 8 |
| *Cent.* | | 16 | 13 | 1 | 28 | 3 | 8 | 56 | 6 | 11 | 5 | 173 | 8 | 0 | 173 | 7 | 52 | −0 | 8 |
| | | 17 | 13 | 45 | 37 | 3 | 9 | 51 | 6 | 23 | 4 | 185 | 11 | 20 | 185 | 10 | 28 | −0 | 52 |
| | | 18 | 14 | 27 | 26 | 3 | 10 | 46 | 7 | 4 | 48 | 196 | 39 | 30 | 196 | 37 | 42 | −1 | 48 |
| | | 19 | 15 | 9 | 6 | 3 | 11 | 40 | 7 | 16 | 22 | 208 | 5 | 15 | 208 | 2 | 21 | −2 | 54 |
| | | 22 | 17 | 22 | 9 | 3 | 14 | 25 | 8 | 20 | 37 | 244 | 23 | 40 | 244 | 18 | 50 | −4 | 50 |
| | | 23 | 18 | 11 | 3 | 3 | 15 | 20 | 9 | 2 | 5 | 257 | 38 | 30 | 257 | 33 | 56 | −4 | 34 |
| *Feb.* | | 24 | 19 | 2 | 14 | 3 | 16 | 15 | 9 | 13 | 40 | 271 | 27 | 30 | 271 | 23 | 50 | −3 | 40 |
| *Mart.* | | 10 | 6 | 28 | 19 | 3 | 28 | 7 | 3 | 4 | 56 | 96 | 15 | 50 | 96 | 16 | 15 | +0 | 25 |
| | | 11 | 7 | 29 | 5 | 3 | 29 | 2 | 3 | 18 | 35 | 112 | 29 | 57 | 112 | 28 | 33 | −0 | 27 |
| | | 12 | 8 | 26 | 48 | 3 | 29 | 57 | 4 | 1 | 54 | 127 | 56 | 0 | 127 | 56 | 25 | +0 | 25 |
| :: | | 13 | 9 | 20 | 18 | 4 | 0 | 51 | 4 | 14 | 52 | 142 | 20 | 0 | 142 | 20 | 41 | +0 | 41 |
| | | 14 | 10 | 9 | 41 | 4 | 1 | 46 | 4 | 27 | 27 | 155 | 42 | 0 | 155 | 42 | 11 | +0 | 11 |

# *LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

Anno JULIANO MDCCXXV. Currente.

| *Transitûs Limbi Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Distantia ☾ à ☉* | | | *Ascens. Rect. Limbi Lunæ Observata.* | | | *Ascens. Rect. Limbi Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Mart.* | 15 | 10 | 55 | 29 | 4 | 2 | 40 | 5 | 9 | 43 | 168 | 10 | 0 | 168 | 10 | 5 | +0 | 5 |
| *Cent.* | 16 | 11 | 39 | 48 | 4 | 3 | 34 | 5 | 21 | 40 | 180 | 15 | 40 | 180 | 15 | 26 | −0 | 14 |
| *Cent.* | 17 | 12 | 21 | 38 | 4 | 4 | 28 | 6 | 3 | 21 | 191 | 44 | 0 | 191 | 42 | 46 | −1 | 14 |
| | 20 | 14 | 29 | 50 | 4 | 7 | 10 | 7 | 7 | 25 | 226 | 49 | 40 | 226 | 45 | 42 | −3 | 58 |
| | 23 | 16 | 53 | 30 | 4 | 9 | 52 | 8 | 11 | 21 | 265 | 48 | 0 | 265 | 43 | 8 | −4 | 52 |
| | 24 | 17 | 45 | 13 | 4 | 10 | 46 | 8 | 22 | 55 | 279 | 45 | 0 | 279 | 40 | 12 | −4 | 48 |
| *Mart.* | 30 | 22 | 45 | 38 | 4 | 16 | 10 | 11 | 8 | 9 | 0 | 58 | 30 | 0 | 57 | 8 | −1 | 22 |
| *Apri.* | 5 | 3 | 17 | 57 | 4 | 20 | 40 | 1 | 18 | 48 | 73 | 47 | 45 | 73 | 52 | 15 | +4 | 30 |
| | 7 | 5 | 22 | 45 | 4 | 22 | 29 | 2 | 17 | 4 | 107 | 25 | 30 | 107 | 28 | 39 | +3 | 9 |
| | 9 | 7 | 17 | 31 | 4 | 24 | 16 | 3 | 14 | 0 | 138 | 10 | 0 | 138 | 10 | 46 | +0 | 46 |
| | 10 | 8 | 7 | 46 | 4 | 25 | 10 | 3 | 26 | 51 | 151 | 45 | 0 | 151 | 45 | 44 | +0 | 44 |
| | 11 | 8 | 54 | 2 | 4 | 26 | 4 | 4 | 9 | 18 | 164 | 20 | 0 | 164 | 20 | 10 | +0 | 10 |
| | 12 | 9 | 37 | 21 | 4 | 26 | 57 | 4 | 21 | 23 | 176 | 10 | 30 | 176 | 10 | 27 | −0 | 3 |
| | 14 | 10 | 59 | 51 | 4 | 28 | 43 | 5 | 14 | 38 | 198 | 49 | 45 | 198 | 48 | 52 | −0 | 53 |
| *Cent.* | 16 | 12 | 25 | 5 | 5 | 0 | 30 | 6 | 7 | 5 | 222 | 10 | 0 | 222 | 6 | 8 | −3 | 52 |
| *Cent.* | 17 | 13 | 9 | 51 | 5 | 1 | 23 | 6 | 18 | 10 | 234 | 22 | 30 | 234 | 16 | 56 | −5 | 34 |
| *Maii.* | 5 | 4 | 12 | 41 | 5 | 16 | 30 | 1 | 28 | 49 | 117 | 27 | 30 | 117 | 32 | 12 | +4 | 42 |
| | 8 | 6 | 52 | 30 | 5 | 19 | 9 | 3 | 8 | 48 | 160 | 28 | 40 | 160 | 30 | 15 | +1 | 35 |
| : : | 9 | 7 | 36 | 50 | 5 | 20 | 2 | 3 | 21 | 14 | 172 | 34 | 30 | 272 | 35 | 31 | +1 | 1 |
| | 10 | 8 | 18 | 45 | 5 | 20 | 55 | 4 | 3 | 17 | 184 | 4 | 20 | 184 | 4 | 44 | +0 | 24 |
| | 12 | 9 | 40 | 24 | 5 | 22 | 40 | 4 | 26 | 26 | 206 | 30 | 45 | 206 | 30 | 30 | −0 | 15 |
| | 13 | 10 | 22 | 19 | 5 | 23 | 32 | 5 | 7 | 39 | 218 | 0 | 20 | 217 | 59 | 28 | −0 | 52 |
| *Cent.* | 15 | 11 | 53 | 28 | 5 | 25 | 18 | 5 | 29 | 46 | 242 | 49 | 30 | 242 | 46 | 0 | −3 | 30 |
| *Cent.* | 16 | 12 | 42 | 7 | 5 | 26 | 11 | 6 | 10 | 48 | 256 | 0 | 30 | 255 | 56 | 29 | −4 | 1 |
| *Maii.* | 20 | 16 | 6 | 53 | 5 | 29 | 42 | 7 | 26 | 5 | 311 | 17 | 0 | 311 | 11 | 35 | −5 | 25 |
| *Junii.* | 2 | 2 | 57 | 36 | 6 | 10 | 16 | 1 | 10 | 6 | 126 | 14 | 0 | 126 | 17 | 54 | +3 | 54 |
| : : | 4 | 4 | 46 | 38 | 6 | 12 | 1 | 2 | 7 | 21 | 155 | 32 | 20 | 155 | 35 | 26 | +3 | 6 |
| | 5 | 5 | 33 | 29 | 6 | 12 | 54 | 2 | 20 | 16 | 168 | 16 | 0 | 168 | 18 | 13 | +2 | 13 |
| | 9 | 8 | 21 | 7 | 6 | 16 | 24 | 4 | 8 | 9 | 214 | 14 | 0 | 214 | 13 | 55 | −0 | 5 |
| | 11 | 9 | 49 | 33 | 6 | 18 | 9 | 5 | 0 | 35 | 238 | 22 | 30 | 238 | 21 | 43 | −0 | 47 |
| | 12 | 10 | 37 | 27 | 6 | 21 | 39 | 5 | 11 | 40 | 251 | 22 | 0 | 251 | 21 | 22 | −0 | 38 |
| *Sect.* : : | 16 | 14 | 1 | 47 | 6 | 22 | 32 | 6 | 26 | 32 | 306 | 32 | 0 | 306 | 27 | 39 | −4 | 21 |
| | 17 | 14 | 52 | 46 | 6 | 23 | 25 | 7 | 8 | 10 | 320 | 18 | 0 | 320 | 12 | 45 | −5 | 15 |
| | 20 | 17 | 8 | 54 | 6 | 26 | 2 | 8 | 14 | 54 | 357 | 23 | 0 | 357 | 18 | 28 | −4 | 32 |

# *LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

Anno JULIANO MDCCXXV. Currente.

| *Transitûs Lunæ T. æq. Limbi* | | | | | *Argument. Annuum.* | | | *Distantia ☾ à ☉* | | | *Ascens. Rect. Limbi Lunæ Observata.* | | | *Ascens. Rect. Limbi Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | *S.* | o. | ′ | *S.* | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Junii.* | 30 | 1 | 39 | 7 | 7 | 3 | 57 | 0 | 21 | 8 | 134 | 9 | 20 | 134 | 10 | 0 | +0 | 40 |
| *Julii.* | 3 | 4 | 11 | 8 | 7 | 6 | 35 | 2 | 1 | 9 | 175 | 14 | 0 | 175 | 14 | 24 | +0 | 24 |
| | 6 | 6 | 18 | 16 | 7 | 9 | 13 | 3 | 7 | 42 | 210 | 3 | 0 | 210 | 3 | 8 | +0 | 8 |
| | 7 | 7 | 1 | 8 | 7 | 10 | 5 | 3 | 19 | 18 | 221 | 47 | 0 | 221 | 46 | 46 | −0 | 14 |
| | 8 | 7 | 45 | 49 | 7 | 10 | 57 | 4 | 0 | 44 | 233 | 58 | 0 | 233 | 58 | 48 | +0 | 48 |
| | 10 | 9 | 22 | 26 | 7 | 12 | 43 | 4 | 23 | 16 | 260 | 9 | 30 | 260 | 10 | 20 | +0 | 50 |
| | 12 | 11 | 7 | 6 | 7 | 14 | 28 | 5 | 15 | 48 | 288 | 22 | 10 | 288 | 20 | 48 | −1 | 22 |
| | 13 | 11 | 58 | 34 | 7 | 15 | 21 | 5 | 27 | 12 | 302 | 15 | 30 | 302 | 13 | 56 | −1 | 34 |
| | 16 | 14 | 23 | 19 | 7 | 17 | 59 | 7 | 2 | 33 | 341 | 30 | 0 | 341 | 27 | 0 | −3 | 0 |
| | 17 | 15 | 7 | 51 | 7 | 18 | 52 | 7 | 14 | 53 | 353 | 39 | 0 | 353 | 36 | 27 | −2 | 33 |
| | 18 | 15 | 52 | 3 | 7 | 19 | 44 | 7 | 27 | 33 | 05 | 43 | 0 | 05 | 40 | 58 | −2 | 2 |
| | 19 | 16 | 37 | 9 | 7 | 20 | 37 | 8 | 10 | 34 | 18 | 0 | 30 | 17 | 58 | 41 | −1 | 49 |
| | 20 | 17 | 24 | 33 | 7 | 21 | 30 | 8 | 23 | 56 | 30 | 52 | 30 | 30 | 50 | 6 | −2 | 24 |
| | 23 | 20 | 11 | 55 | 7 | 24 | 9 | 10 | 5 | 50 | 75 | 47 | 20 | 75 | 41 | 56 | −5 | 24 |
| *Julii.* | 24 | 21 | 16 | 9 | 7 | 25 | 2 | 10 | 20 | 7 | 92 | 52 | 30 | 92 | 47 | 48 | −4 | 42 |
| *Aug.* | 6 | 7 | 15 | 43 | 8 | 5 | 38 | 3 | 22 | 41 | 255 | 0 | 20 | 254 | 59 | 58 | −0 | 22 |
| | 8 | 9 | 2 | 0 | 8 | 7 | 25 | 4 | 15 | 33 | 283 | 2 | 20 | 283 | 2 | 56 | +0 | 36 |
| | 9 | 9 | 50 | 22 | 8 | 8 | 18 | 4 | 27 | 2 | 296 | 44 | 0 | 296 | 44 | 13 | +0 | 13 |
| | 13 | 13 | 5 | 14 | 8 | 11 | 51 | 6 | 14 | 46 | 349 | 31 | 30 | 349 | 30 | 0 | −1 | 30 |
| | 14 | 13 | 50 | 10 | 8 | 12 | 44 | 6 | 27 | 20 | 01 | 46 | 30 | 01 | 45 | 0 | −1 | 30 |
| | 15 | 14 | 34 | 26 | 8 | 13 | 37 | 7 | 10 | 12 | 13 | 51 | 30 | 13 | 49 | 31 | −1 | 59 |
| | 16 | 15 | 22 | 21 | 8 | 14 | 30 | 7 | 23 | 23 | 26 | 51 | 20 | 26 | 51 | 27 | +0 | 6 |
| | 17 | 16 | 12 | 11 | 8 | 15 | 24 | 8 | 6 | 52 | 40 | 20 | 0 | 40 | 19 | 38 | −0 | 22 |
| | 18 | 17 | 5 | 58 | 8 | 16 | 17 | 8 | 20 | 37 | 54 | 48 | 0 | 54 | 46 | 10 | −1 | 50 |
| | 20 | 19 | 5 | 43 | 8 | 18 | 5 | 9 | 18 | 37 | 86 | 47 | 30 | 86 | 43 | 52 | −3 | 38 |
| *Aug.* | 21 | 20 | 8 | 59 | 8 | 18 | 59 | 10 | 2 | 39 | 103 | 38 | 15 | 103 | 34 | 17 | −3 | 58 |
| *Cent.* | 1 | 4 | 22 | 8 | 8 | 27 | 55 | 2 | 9 | 32 | 236 | 44 | 20 | 236 | 43 | 40 | −0 | 40 |
| *Cent.* | 2 | 5 | 9 | 11 | 8 | 28 | 48 | 2 | 21 | 2 | 249 | 48 | 10 | 249 | 48 | 9 | −0 | 1 |
| *Sept.* | 5 | 7 | 41 | 11 | 9 | 1 | 30 | 3 | 25 | 35 | 290 | 57 | 40 | 290 | 59 | 40 | +2 | 0 |
| | 7 | 9 | 21 | 55 | 9 | 3 | 18 | 4 | 19 | 7 | 318 | 11 | 0 | 318 | 10 | 11 | −0 | 49 |
| | 8 | 10 | 9 | 51 | 9 | 4 | 12 | 5 | 1 | 11 | 331 | 11 | 15 | 331 | 9 | 56 | −1 | 19 |
| | 9 | 10 | 56 | 20 | 9 | 5 | 6 | 5 | 13 | 29 | 343 | 49 | 20 | 343 | 47 | 51 | −1 | 29 |
| | 11 | 12 | 30 | 11 | 9 | 6 | 53 | 6 | 8 | 58 | 9 | 19 | 20 | 9 | 17 | 51 | −1 | 29 |
| | 12 | 13 | 17 | 30 | 9 | 7 | 47 | 6 | 22 | 10 | 22 | 10 | 0 | 22 | 9 | 17 | −0 | 43 |

# *LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

Anno JULIANO MDCCXXV. Currente.

| *Transitus Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Distantia ☾ à ☉* | | | *Ascens. Rect. Limbi Lunæ Observata.* | | | *Ascens. Rect. Limbi Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Sept.* | 13 | 14 | 7 | 25 | 9 | 8 | 41 | 7 | 5 | 39 | 35 | 40 | 0 | 35 | 39 | 40 | −0 | 20 |
| | 14 | 15 | 0 | 58 | 9 | 9 | 36 | 7 | 19 | 23 | 50 | 4 | 30 | 50 | 4 | 18 | −0 | 12 |
| | 15 | 15 | 58 | 32 | 9 | 10 | 30 | 8 | 3 | 19 | 65 | 29 | 45 | 65 | 29 | 51 | +0 | 6 |
| | 16 | 16 | 59 | 39 | 9 | 11 | 25 | 8 | 17 | 20 | 81 | 48 | 0 | 81 | 47 | 37 | −0 | 23 |
| | 17 | 18 | 2 | 25 | 9 | 12 | 19 | 9 | 1 | 22 | 98 | 31 | 15 | 98 | 29 | 51 | −1 | 24 |
| *Sept.*:: | 19 | 20 | 2 | 50 | 9 | 14 | 9 | 9 | 28 | 58 | 130 | 40 | 40 | 130 | 38 | 27 | −2 | 13 |
| *Octo.* | 1 | 4 | 40 | 22 | 9 | 24 | 7 | 2 | 11 | 50 | 271 | 15 | 30 | 271 | 15 | 22 | −0 | 8 |
| | 2 | 5 | 31 | 50 | 9 | 25 | 1 | 2 | 23 | 17 | 285 | 8 | 30 | 285 | 9 | 22 | +0 | 52 |
| | 3 | 6 | 22 | 44 | 9 | 25 | 56 | 3 | 4 | 52 | 298 | 53 | 20 | 298 | 54 | 28 | +1 | 8 |
| | 4 | 7 | 10 | 47 | 9 | 26 | 51 | 3 | 16 | 35 | 312 | 34 | 0 | 312 | 34 | 49 | +0 | 49 |
| | 5 | 8 | 0 | 16 | 9 | 27 | 45 | 3 | 28 | 34 | 325 | 18 | 50 | 325 | 18 | 21 | −0 | 29 |
| | 7 | 9 | 32 | 17 | 9 | 29 | 35 | 4 | 23 | 19 | 350 | 21 | 0 | 350 | 19 | 37 | −1 | 23 |
| | 11 | 12 | 50 | 14 | 10 | 3 | 14 | 6 | 16 | 50 | 43 | 55 | 0 | 43 | 57 | 48 | +2 | 48 |
| | 15 | 16 | 58 | 8 | 10 | 6 | 56 | 8 | 13 | 26 | 110 | 0 | 15 | 109 | 59 | 19 | −0 | 56 |
| | 16 | 17 | 58 | 27 | 10 | 7 | 51 | 8 | 27 | 21 | 126 | 6 | 40 | 126 | 4 | 25 | −2 | 15 |
| | 19 | 20 | 31 | 23 | 10 | 10 | 36 | 10 | 7 | 0 | 167 | 24 | 30 | 167 | 22 | 20 | −2 | 10 |
| | 30 | 4 | 15 | 8 | 10 | 19 | 48 | 2 | 2 | 28 | 293 | 31 | 0 | 293 | 32 | 46 | +1 | 46 |
| *Octo.* | 31 | 5 | 4 | 37 | 10 | 20 | 43 | 2 | 13 | 55 | 306 | 54 | 30 | 306 | 56 | 17 | +1 | 47 |
| *Nov.* | 1 | 5 | 52 | 15 | 10 | 21 | 39 | 2 | 25 | 34 | 319 | 50 | 0 | 319 | 52 | 17 | +2 | 17 |
| | 2 | 6 | 28 | 8 | 10 | 22 | 34 | 3 | 7 | 29 | 332 | 19 | 20 | 332 | 21 | 7 | +1 | 47 |
| | 3 | 7 | 22 | 45 | 10 | 23 | 29 | 3 | 19 | 43 | 344 | 29 | 30 | 344 | 30 | 11 | +0 | 41 |
| | 4 | 8 | 7 | 4 | 10 | 24 | 25 | 4 | 2 | 19 | 356 | 35 | 20 | 356 | 36 | 6 | +0 | 46 |
| :: | 5 | 8 | 52 | 23 | 10 | 25 | 20 | 4 | 15 | 17 | 8 | 56 | 0 | 8 | 54 | 35 | −1 | 25 |
| | 6 | 9 | 40 | 0 | 10 | 26 | 16 | 4 | 28 | 41 | 21 | 51 | 0 | 21 | 49 | 30 | −1 | 30 |
| | 9 | 12 | 31 | 53 | 10 | 29 | 3 | 6 | 10 | 58 | 67 | 54 | 0 | 67 | 51 | 49 | −2 | 11 |
| | 10 | 13 | 37 | 39 | 11 | 0 | 0 | 6 | 25 | 28 | 85 | 22 | 30 | 85 | 21 | 55 | −0 | 35 |
| | 11 | 14 | 45 | 35 | 11 | 0 | 56 | 7 | 9 | 59 | 103 | 8 | 20 | 103 | 8 | 20 | −0 | 0 |
| | 12 | 15 | 48 | 53 | 11 | 1 | 52 | 7 | 24 | 18 | 120 | 14 | 30 | 120 | 12 | 55 | −1 | 35 |
| | 16 | 19 | 14 | 50 | 11 | 5 | 35 | 9 | 17 | 59 | 175 | 49 | 0 | 175 | 44 | 34 | −4 | 26 |
| | 17 | 19 | 57 | 36 | 11 | 6 | 31 | 10 | 0 | 22 | 187 | 31 | 20 | 187 | 27 | 19 | −4 | 1 |
| *Nov.* | 19 | 21 | 21 | 55 | 11 | 8 | 22 | 10 | 24 | 5 | 210 | 38 | 15 | 210 | 35 | 20 | −2 | 55 |
| *Dec.* | 2 | 6 | 0 | 9 | 11 | 18 | 35 | 2 | 28 | 44 | 351 | 23 | 0 | 351 | 26 | 44 | +3 | 44 |
| | 3 | 7 | 28 | 2 | 11 | 20 | 27 | 3 | 24 | 12 | 15 | 23 | 15 | 15 | 25 | 4 | +1 | 49 |
| | 4 | 8 | 15 | 42 | 11 | 21 | 23 | 4 | 7 | 35 | 28 | 19 | 15 | 28 | 20 | 48 | +1 | 33 |

# *LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

## Anno JULIANO MDCCXXV. Currente.

| *Transitûs Limbi Lunæ T. æq.* | | | | | *Argument Annuum.* | | | *Distantia ☾ à ☉* | | | *Longitudo Centri Lunæ Observata.* | | | *Longitudo Centri Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | *S.* | o. | ′ | *S.* | o. | ′ | ☊ | ′ | ″ | ☊ | ′ | ″ | ′ | ″ |
| *Dec.* | 5 | 9 | 8 | 5 | 11 | 22 | 19 | 4 | 21 | 24 | ♉ 15 | 42 | 26 | ♉ 15 | 42 | 34 | +o | 8 |
| | 6 | 10 | 6 | 14 | 11 | 23 | 15 | 5 | 5 | 36 | ♊ 1 | 5 | 14 | ♊ 1 | 4 | 26 | —o | 48 |
| | 7 | 11 | 10 | 12 | 11 | 24 | 11 | 5 | 20 | 6 | ♊16 | 54 | 4 | ♊16 | 53 | 17 | —o | 47 |
| *Cent.* | 8 | 12 | 19 | 26 | 11 | 25 | 8 | 6 | 4 | 46 | ♋ 2 | 58 | 38 | ♋ 2 | 58 | 3 | —o | 35 |
| | 9 | 13 | 28 | 47 | 11 | 26 | 5 | 6 | 19 | 26 | ♋19 | 2 | 55 | ♋19 | 2 | 7 | —o | 48 |
| | 10 | 14 | 32 | 56 | 11 | 27 | 1 | 7 | 3 | 54 | ♌ 4 | 49 | 34 | ♌ 4 | 48 | 46 | —o | 48 |
| | 11 | 15 | 31 | 12 | 11 | 27 | 58 | 7 | 18 | 3 | ♌20 | 8 | 31 | ♌20 | 7 | 9 | —1 | 22 |
| *Dec.* | 31 | 6 | 7 | 41 | o | 15 | 39 | 3 | 3 | 42 | ♈24 | 58 | 41 | ♈24 | 59 | 8 | +o | 27 |

## Anno JULIANO MDCCXXVI. Currente.

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Jan.* | 3 | 8 | 47 | 55 | o | 18 | 28 | 4 | 14 | 50 | ♊ 8 | 37 | 12 | ♊ 8 | 37 | 46 | +o | 34 |
| | 4 | 9 | 52 | 32 | o | 19 | 24 | 4 | 29 | 14 | ♊24 | 12 | 6 | ♊24 | 11 | 52 | —o | 14 |
| | 5 | 11 | o | 12 | o | 20 | 21 | 5 | 13 | 50 | ♋10 | 6 | 37 | ♋10 | 6 | 17 | —o | 20 |
| *Cent.* | 6 | 12 | 8 | 23 | o | 21 | 17 | 5 | 28 | 25 | ♋26 | 7 | 46 | ♋26 | 7 | 30 | —o | 16 |
| | 7 | 13 | 12 | 15 | o | 22 | 14 | 6 | 12 | 52 | ♌11 | 58 | 57 | ♌11 | 59 | 3 | +o | 6 |
| | 8 | 14 | 9 | 8 | o | 23 | 10 | 6 | 27 | o | ♌27 | 26 | 57 | ♌27 | 26 | 58 | +o | 1 |
| | 9 | 15 | o | 42 | o | 24 | 6 | 7 | 10 | 47 | ♍12 | 25 | 5 | ♍12 | 23 | 40 | —1 | 25 |
| :: | 10 | 15 | 48 | 8 | o | 25 | 2 | 7 | 24 | 8 | ♍26 | 48 | o | ♍26 | 45 | 41 | —2 | 19 |
| :: | 13 | 18 | o | 45 | o | 27 | 48 | 9 | 1 | 48 | ♎ 6 | 54 | 53 | ♎ 6 | 47 | 46 | —7 | 7 |
| :: | 14 | 18 | 45 | 43 | o | 28 | 43 | 9 | 13 | 38 | ♎19 | 31 | 7 | ♎19 | 25 | o | —6 | 7 |
| | 25 | 2 | 39 | 35 | 1 | 8 | 1 | 1 | 6 | 52 | ♓24 | 10 | 39 | ♓24 | 10 | 4 | —o | 35 |
| | 28 | 4 | 51 | 15 | 1 | 10 | 47 | 2 | 14 | 15 | ♉ 4 | 13 | 30 | ♉ 4 | 15 | 55 | +2 | 25 |
| | 30 | 6 | 35 | 54 | 1 | 12 | 38 | 3 | 11 | 7 | ♊ 2 | 35 | 5 | ♊ 2 | 37 | o | +1 | 55 |
| *Cent.* | 31 | 7 | 40 | 14 | 1 | 13 | 34 | 3 | 25 | 7 | ♊17 | 23 | 54 | ♊17 | 26 | 18 | +2 | 24 |
| *Feb.* | 1 | 8 | 40 | 12 | 1 | 14 | 30 | 4 | 9 | 18 | ♋ 2 | 34 | 34 | ♋ 2 | 34 | 38 | +o | 4 |
| | 3 | 10 | 49 | 22 | 1 | 16 | 22 | 5 | 7 | 58 | ♌ 3 | 40 | 1 | ♌ 3 | 39 | 10 | —o | 51 |
| *Cent.* | 5 | 12 | 44 | 12 | 1 | 18 | 13 | 6 | 6 | 6 | ♍ 4 | 28 | 46 | ♍ 4 | 29 | 8 | +o | 22 |
| | 6 | 13 | 35 | 29 | 1 | 19 | 9 | 6 | 19 | 43 | ♍19 | 23 | 58 | ♍19 | 23 | 39 | —o | 19 |
| | 9 | 15 | 53 | 14 | 1 | 21 | 54 | 7 | 28 | 24 | ♎ 1 | 17 | 43 | ♎ 1 | 12 | 13 | —5 | 30 |
| | 11 | 17 | 26 | o | 1 | 23 | 45 | 8 | 22 | 33 | ♎27 | 4 | 29 | ♎26 | 58 | 22 | —6 | 7 |
| | 12 | 18 | 13 | 41 | 1 | 24 | 40 | 9 | 4 | 14 | ♐ 9 | 33 | 4 | ♐ 9 | 27 | 7 | —5 | 57 |
| | 24 | 2 | 49 | 25 | 2 | 4 | 44 | 1 | 12 | 43 | ♉ o | 3 | 56 | ♉ o | 4 | 4 | +o | 8 |
| | 25 | 3 | 38 | 10 | 2 | 5 | 39 | 1 | 25 | 42 | ♉13 | 59 | 15 | ♉ 13 | 59 | 53 | +o | 38 |

# *LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

Anno JULIANO MDCCXXVI. Currente.

| *Transitûs Limbi Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Distantia ☾ à ☉* | | | *Longitudo Centri Lunæ Observata.* | | | *Longitudo Centri Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Feb.* | 26 | 4 | 31 | 8 | 2 | 6 | 34 | 2 | 9 | 2 | ♉ 28 | 9 | 49 | ♉ 28 | 10 | 56 | +1 | 7 |
| | 27 | 5 | 28 | 45 | 2 | 7 | 29 | 2 | 22 | 41 | ♊ 12 | 36 | 25 | ♊ 12 | 37 | 12 | +0 | 47 |
| *Feb.* | 28 | 6 | 30 | 12 | 2 | 8 | 25 | 3 | 6 | 35 | ♊ 27 | 18 | 11 | ♊ 27 | 18 | 17 | +0 | 6 |
| *Mart.* | 1 | 7 | 37 | 49 | 2 | 9 | 20 | 3 | 20 | 41 | ♋ 12 | 15 | 8 | ♋ 12 | 14 | 24 | −0 | 44 |
| | 2 | 8 | 35 | 58 | 2 | 10 | 15 | 4 | 4 | 44 | ♋ 27 | 15 | 44 | ♋ 27 | 14 | 11 | −1 | 33 |
| | 4 | 10 | 30 | 5 | 2 | 12 | 5 | 5 | 2 | 35 | ♌ 27 | 19 | 29 | ♌ 27 | 17 | 58 | −1 | 31 |
| | 5 | 11 | 21 | 5 | 2 | 13 | 0 | 5 | 16 | 11 | ♍ 12 | 9 | 1 | ♍ 12 | 7 | 20 | −1 | 41 |
| *Cent.* | 6 | 12 | 10 | 8 | 2 | 13 | 55 | 5 | 29 | 29 | ♍ 26 | 42 | 2 | ♍ 26 | 41 | 22 | −0 | 40 |
| | 9 | 14 | 29 | 11 | 2 | 16 | 38 | 7 | 7 | 31 | ♎ 8 | 16 | 16 | ♎ 8 | 12 | 48 | −3 | 28 |
| | 10 | 15 | 16 | 31 | 2 | 17 | 32 | 7 | 19 | 37 | ♎ 21 | 23 | 0 | ♎ 21 | 19 | 28 | −3 | 32 |
| | 12 | 16 | 56 | 19 | 2 | 19 | 21 | 8 | 13 | 13 | ♐ 16 | 46 | 50 | ♐ 16 | 42 | 32 | −4 | 18 |
| | 26 | 3 | 23 | 7 | 3 | 1 | 5 | 1 | 21 | 12 | ♈ 8 | 8 | 15 | ♈ 8 | 9 | 6 | +0 | 51 |
| | 27 | 4 | 24 | 12 | 3 | 1 | 59 | 2 | 5 | 2 | ♈ 22 | 53 | 48 | ♈ 22 | 54 | 32 | +0 | 44 |
| *Mart.* | 30 | 7 | 28 | 36 | 3 | 4 | 43 | 3 | 16 | 58 | ♌ 7 | 16 | 56 | ♌ 7 | 19 | 9 | +2 | 13 |
| *Apri.* | 5 | 12 | 20 | 22 | 3 | 10 | 6 | 6 | 5 | 30 | ♎ 2 | 15 | 5 | ♎ 2 | 13 | 9 | −1 | 56 |
| | 6 | 13 | 7 | 11 | 3 | 11 | 0 | 6 | 17 | 36 | ♎ 15 | 32 | 58 | ♎ 15 | 30 | 17 | −2 | 41 |
| | 7 | 13 | 55 | 52 | 3 | 11 | 53 | 6 | 29 | 29 | ♎ 28 | 35 | 20 | ♎ 28 | 32 | 0 | −3 | 20 |
| | 8 | 14 | 46 | 28 | 3 | 12 | 47 | 7 | 11 | 11 | ♐ 11 | 23 | 35 | ♐ 11 | 19 | 22 | −4 | 13 |
| | 9 | 15 | 38 | 18 | 3 | 13 | 40 | 7 | 22 | 46 | ♐ 23 | 58 | 5 | ♐ 23 | 54 | 42 | −3 | 23 |
| *Apri.* | 16 | 21 | 9 | 52 | 3 | 19 | 55 | 10 | 14 | 19 | ♓ 21 | 33 | 56 | ♓ 21 | 33 | 36 | −0 | 20 |
| *Maii.* | 9 | 16 | 4 | 15 | 4 | 9 | 26 | 7 | 25 | 54 | ♒ 26 | 11 | 7 | ♒ 26 | 8 | 28 | −2 | 39 |
| | 13 | 19 | 3 | 0 | 4 | 12 | 57 | 9 | 12 | 17 | ♓ 15 | 49 | 27 | ♓ 15 | 48 | 21 | −1 | 6 |
| | 14 | 19 | 45 | 2 | 4 | 13 | 50 | 9 | 24 | 28 | ♓ 28 | 47 | 4 | ♓ 28 | 45 | 14 | −1 | 50 |
| | 16 | 21 | 13 | 54 | 4 | 15 | 35 | 10 | 19 | 55 | ♈ 25 | 56 | 52 | ♈ 25 | 55 | 50 | −1 | 2 |
| | 17 | 22 | 3 | 37 | 4 | 16 | 28 | 11 | 3 | 12 | ♉ 10 | 17 | 26 | ♉ 10 | 16 | 31 | −0 | 55 |
| | 27 | 6 | 43 | 51 | 4 | 24 | 25 | 3 | 9 | 32 | ♍ 25 | 59 | 46 | ♍ 25 | 59 | 29 | −0 | 17 |
| | 29 | 8 | 12 | 0 | 4 | 26 | 10 | 4 | 5 | 4 | ♎ 23 | 3 | 18 | ♎ 23 | 2 | 30 | −0 | 48 |
| *Maii.* | 30 | 8 | 56 | 34 | 4 | 27 | 3 | 4 | 17 | 17 | ♏ 6 | 10 | 46 | ♏ 6 | 10 | 1 | −0 | 45 |
| *Junii.* | 1 | 10 | 31 | 10 | 4 | 28 | 48 | 5 | 10 | 50 | ♐ 1 | 52 | 22 | ♐ 1 | 51 | 31 | −0 | 51 |
| | 2 | 11 | 21 | 39 | 4 | 29 | 41 | 5 | 22 | 16 | ♐ 14 | 30 | 10 | ♐ 14 | 29 | 14 | −0 | 56 |
| | 6 | 14 | 46 | 24 | 5 | 3 | 11 | 7 | 6 | 59 | ♑ 4 | 3 | 22 | ♑ 4 | 0 | 23 | −2 | 59 |
| | 7 | 15 | 33 | 34 | 5 | 4 | 4 | 7 | 18 | 13 | ♑ 16 | 18 | 45 | ♑ 16 | 15 | 48 | −2 | 57 |
| | 8 | 16 | 17 | 11 | 5 | 4 | 56 | 7 | 29 | 34 | ♑ 28 | 35 | 20 | ♑ 28 | 32 | 32 | −2 | 48 |
| | 9 | 16 | 59 | 0 | 5 | 5 | 48 | 8 | 11 | 8 | ♓ 10 | 58 | 8 | ♓ 10 | 56 | 11 | −1 | 57 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVI. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| Junii. | 10 | 17 | 40 | 5 | 5 | 6 | 41 | 8 | 22 | 57 | ♓23 | 32 | 52 | ♓23 | 30 | 35 | −2 | 17 |
| | 11 | 18 | 21 | 23 | 5 | 7 | 33 | 9 | 5 | 6 | ♈ 6 | 25 | 18 | ♈ 6 | 22 | 23 | −2 | 55 |
| | 12 | 19 | 4 | 45 | 5 | 8 | 26 | 9 | 17 | 39 | ♈19 | 40 | 46 | ♈19 | 37 | 58 | −2 | 48 |
| | 15 | 21 | 39 | 38 | 5 | 11 | 4 | 10 | 27 | 54 | ♊ 2 | 38 | 17 | ♊ 2 | 34 | 0 | −4 | 17 |
| | 21 | 2 | 57 | 37 | 5 | 15 | 29 | 1 | 10 | 25 | ♌21 | 15 | 31 | ♌21 | 18 | 55 | +3 | 24 |
| | 22 | 3 | 50 | 53 | 5 | 16 | 22 | 1 | 24 | 36 | ♍ 6 | 24 | 16 | ♍ 6 | 27 | 31 | +3 | 15 |
| | 25 | 6 | 10 | 21 | 5 | 18 | 59 | 3 | 4 | 48 | ♎18 | 51 | 22 | ♎18 | 52 | 11 | −0 | 49 |
| | 29 | 9 | 17 | 58 | 5 | 22 | 29 | 4 | 23 | 2 | ♐10 | 30 | 41 | ♐10 | 32 | 1 | +1 | 20 |
| Junii. | 30 | 10 | 9 | 15 | 5 | 23 | 22 | 5 | 4 | 24 | ♐22 | 59 | 14 | ♐23 | 0 | 58 | +1 | 44 |
| Julii. | 1 | 11 | 1 | 15 | 5 | 24 | 14 | 5 | 15 | 36 | ♑ 5 | 23 | 28 | ♑ 5 | 24 | 41 | +1 | 13 |
| | 2 | 11 | 52 | 31 | 5 | 25 | 7 | 5 | 26 | 42 | ♑17 | 42 | 39 | ♑17 | 44 | 26 | +1 | 47 |
| Cent. | 3 | 12 | 43 | 4 | 5 | 26 | 0 | 6 | 7 | 43 | ♒ 0 | 0 | 32 | ♒ 0 | 0 | 16 | −0 | 16 |
| : : | 5 | 14 | 15 | 20 | 5 | 27 | 45 | 6 | 29 | 53 | ♒24 | 32 | 2 | ♒24 | 30 | 37 | −1 | 25 |
| | 6 | 14 | 57 | 28 | 5 | 28 | 37 | 7 | 11 | 8 | ♓ 6 | 50 | 56 | ♓ 6 | 49 | 2 | −1 | 54 |
| | 7 | 15 | 38 | 19 | 5 | 29 | 30 | 7 | 22 | 36 | ♓19 | 16 | 6 | ♓19 | 13 | 53 | −2 | 13 |
| | 8 | 16 | 18 | 55 | 6 | 0 | 22 | 8 | 4 | 21 | ♈ 1 | 52 | 0 | ♈ 1 | 49 | 20 | −2 | 40 |
| | 10 | 17 | 44 | 7 | 6 | 2 | 7 | 8 | 28 | 56 | ♈27 | 53 | 49 | ♈27 | 51 | 48 | −2 | 1 |
| | 12 | 19 | 24 | 28 | 6 | 3 | 52 | 9 | 25 | 16 | ♉25 | 44 | 29 | ♉25 | 39 | 41 | −4 | 48 |
| | 15 | 22 | 34 | 10 | 6 | 6 | 32 | 11 | 7 | 53 | ♋11 | 30 | 25 | ♋11 | 25 | 19 | −5 | 6 |
| Julii. | 25 | 6 | 24 | 40 | 6 | 14 | 28 | 3 | 11 | 12 | ♏23 | 43 | 3 | ♏23 | 44 | 15 | +1 | 12 |
| Cent. | 1 | 12 | 12 | 49 | 6 | 20 | 39 | 6 | 0 | 40 | ♒20 | 35 | 21 | ♒20 | 35 | 47 | +0 | 26 |
| Aug. | 2 | 12 | 56 | 45 | 6 | 21 | 32 | 6 | 11 | 48 | ♓ 2 | 56 | 26 | ♓ 2 | 56 | 7 | −0 | 19 |
| | 3 | 13 | 38 | 2 | 6 | 22 | 24 | 6 | 23 | 4 | ♓15 | 22 | 4 | ♓15 | 21 | 8 | −0 | 56 |
| | 4 | 14 | 18 | 35 | 6 | 23 | 17 | 7 | 4 | 32 | ♓27 | 55 | 2 | ♓27 | 53 | 56 | −1 | 6 |
| | 5 | 14 | 59 | 30 | 6 | 24 | 10 | 7 | 16 | 17 | ♈10 | 38 | 56 | ♈10 | 37 | 38 | −1 | 18 |
| | 6 | 15 | 41 | 56 | 6 | 25 | 3 | 7 | 28 | 22 | ♈23 | 36 | 9 | ♈23 | 35 | 27 | −0 | 42 |
| | 7 | 16 | 27 | 16 | 6 | 25 | 56 | 8 | 10 | 50 | ♉ 6 | 52 | 13 | ♉ 6 | 51 | 20 | −0 | 53 |
| | 8 | 17 | 16 | 46 | 6 | 26 | 49 | 8 | 23 | 44 | ♉20 | 31 | 48 | ♉20 | 29 | 26 | −2 | 22 |
| | 9 | 18 | 11 | 30 | 6 | 27 | 42 | 9 | 7 | 3 | ♊ 4 | 37 | 55 | ♊ 4 | 33 | 45 | −4 | 10 |
| | 11 | 20 | 15 | 14 | 6 | 29 | 29 | 10 | 4 | 55 | ♋ 4 | 13 | 37 | ♋ 4 | 7 | 20 | −6 | 17 |
| | 12 | 21 | 20 | 21 | 7 | 0 | 23 | 10 | 19 | 17 | ♋19 | 39 | 16 | ♋19 | 31 | 45 | −7 | 31 |
| | 13 | 22 | 23 | 26 | 7 | 1 | 17 | 11 | 3 | 46 | ♌ 5 | 17 | 55 | ♌ 5 | 11 | 18 | −6 | 37 |
| Aug. | 19 | 2 | 41 | 41 | 7 | 5 | 44 | 1 | 13 | 48 | ♎21 | 8 | 29 | ♎21 | 7 | 26 | −1 | 3 |
| | 20 | 3 | 29 | 6 | 7 | 6 | 37 | 1 | 26 | 50 | ♏ 5 | 4 | 58 | ♏ 5 | 4 | 15 | +0 | 43 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVI. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Aug.* | 22 | 5 | 7 | 25 | 7 | 8 | 24 | 2 | 21 | 50 | ♈ 1 | 40 | 31 | ♈ 1 | 41 | 0 | +0 | 29 |
| | 23 | 5 | 58 | 51 | 7 | 9 | 18 | 3 | 3 | 51 | ♈14 | 28 | 20 | ♈14 | 29 | 11 | +0 | 51 |
| | 24 | 6 | 51 | 7 | 7 | 10 | 11 | 3 | 15 | 35 | ♉27 | 1 | 47 | ♉27 | 3 | 18 | +1 | 31 |
| | 25 | 7 | 43 | 12 | 7 | 11 | 5 | 3 | 27 | 6 | ♍ 9 | 24 | 54 | ♍ 9 | 27 | 42 | +2 | 48 |
| | 26 | 8 | 34 | 1 | 7 | 11 | 59 | 4 | 8 | 27 | ♍21 | 43 | 22 | ♍21 | 46 | 16 | +2 | 54 |
| | 27 | 9 | 22 | 40 | 7 | 12 | 52 | 4 | 19 | 41 | ♎ 4 | 0 | 3 | ♎ 4 | 2 | 43 | +2 | 40 |
| | 28 | 10 | 8 | 50 | 7 | 13 | 46 | 5 | 0 | 52 | ♎16 | 18 | 6 | ♎16 | 20 | 6 | +2 | 0 |
| *Aug.* | 29 | 10 | 52 | 36 | 7 | 14 | 39 | 5 | 12 | 4 | ♎28 | 39 | 43 | ♎28 | 41 | 14 | +1 | 31 |
| *Cent.* | 31 | 12 | 16 | 43 | 7 | 16 | 26 | 6 | 4 | 45 | ♐23 | 45 | 49 | ♐23 | 45 | 44 | −0 | 5 |
| *Cent.* | 1 | 12 | 56 | 46 | 7 | 17 | 19 | 6 | 16 | 22 | ♑ 6 | 32 | 40 | ♑ 6 | 32 | 33 | −0 | 7 |
| *Sept.* | 2 | 13 | 41 | 0 | 7 | 18 | 13 | 6 | 28 | 16 | ♑19 | 33 | 27 | ♑19 | 33 | 42 | +0 | 15 |
| | 3 | 14 | 25 | 41 | 7 | 19 | 6 | 7 | 10 | 28 | ♉ 2 | 49 | 17 | ♉ 2 | 48 | 41 | −0 | 36 |
| | 4 | 15 | 13 | 50 | 7 | 20 | 0 | 7 | 23 | 2 | ♉16 | 21 | 20 | ♉16 | 20 | 13 | −1 | 7 |
| | 6 | 17 | 3 | 32 | 7 | 21 | 48 | 8 | 19 | 17 | ♊14 | 20 | 16 | ♊14 | 18 | 40 | −1 | 36 |
| | 7 | 18 | 4 | 37 | 7 | 22 | 42 | 9 | 2 | 58 | ♊28 | 49 | 41 | ♊28 | 47 | 6 | −2 | 35 |
| | 10 | 21 | 8 | 24 | 7 | 25 | 26 | 10 | 15 | 15 | ♋13 | 48 | 56 | ♋13 | 46 | 19 | −2 | 37 |
| | 17 | 2 | 6 | 28 | 8 | 0 | 50 | 1 | 6 | 44 | ♌12 | 17 | 6 | ♌12 | 15 | 57 | −1 | 9 |
| | 24 | 8 | 3 | 40 | 8 | 7 | 11 | 3 | 29 | 44 | ♏11 | 32 | 26 | ♏11 | 34 | 14 | +1 | 48 |
| | 25 | 8 | 48 | 12 | 8 | 8 | 5 | 4 | 11 | 5 | ♏23 | 50 | 42 | ♏23 | 52 | 26 | +1 | 44 |
| | 27 | 10 | 12 | 9 | 8 | 9 | 54 | 5 | 3 | 58 | ♐18 | 50 | 55 | ♐18 | 52 | 20 | +1 | 25 |
| | 28 | 10 | 53 | 27 | 8 | 10 | 48 | 5 | 15 | 37 | ♑ 1 | 40 | 32 | ♑ 1 | 41 | 1 | +0 | 29 |
| *Sept.* | 30 | 12 | 21 | 6 | 8 | 12 | 36 | 6 | 9 | 40 | ♑28 | 8 | 50 | ♑28 | 8 | 14 | −0 | 36 |
| *Octo.* | 1 | 13 | 9 | 54 | 8 | 13 | 31 | 6 | 22 | 8 | ♒11 | 49 | 19 | ♒11 | 48 | 56 | −0 | 23 |
| | 2 | 14 | 1 | 54 | 8 | 14 | 26 | 7 | 4 | 56 | ♓25 | 47 | 34 | ♓25 | 46 | 40 | −0 | 54 |
| | 3 | 14 | 58 | 24 | 8 | 15 | 21 | 7 | 18 | 5 | ♊10 | 1 | 6 | ♊10 | 0 | 18 | −0 | 48 |
| | 4 | 15 | 58 | 48 | 8 | 16 | 16 | 8 | 1 | 32 | ♊24 | 28 | 43 | ♊24 | 27 | 15 | −1 | 28 |
| | 5 | 17 | 1 | 1 | 8 | 17 | 11 | 8 | 15 | 16 | ♋ 9 | 6 | 30 | ♋ 9 | 4 | 9 | −2 | 21 |
| | 6 | 18 | 2 | 27 | 8 | 18 | 6 | 8 | 29 | 10 | ♎23 | 50 | 27 | ♋23 | 47 | 12 | −3 | 15 |
| | 7 | 19 | 0 | 56 | 8 | 19 | 1 | 9 | 13 | 7 | ♌ 8 | 37 | 38 | ♌ 8 | 33 | 6 | −4 | 32 |
| | 10 | 21 | 35 | 3 | 8 | 21 | 46 | 10 | 24 | 32 | ♍22 | 46 | 25 | ♍22 | 43 | 8 | −3 | 17 |
| | 20 | 5 | 8 | 30 | 9 | 0 | 1 | 2 | 15 | 52 | ♑24 | 11 | 20 | ♑24 | 13 | 3 | +1 | 43 |
| | 21 | 5 | 56 | 42 | 9 | 0 | 56 | 2 | 27 | 19 | ♒ 6 | 28 | 32 | ♒ 6 | 30 | 27 | +1 | 55 |
| | 25 | 8 | 47 | 23 | 9 | 4 | 36 | 4 | 13 | 26 | ♓26 | 2 | 15 | ♓26 | 3 | 23 | +1 | 8 |
| *Octo.* | 31 | 13 | 49 | 44 | 9 | 10 | 9 | 6 | 29 | 28 | ♊19 | 22 | 17 | ♊19 | 20 | 37 | −1 | 40 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

## Anno JULIANO MDCCXXVI. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Nov.* | 1 | 14 | 53 | 11 | 9 | 11 | 4 | 7 | 13 | 13 | ♋ 4 | 18 | 39 | ♋ 4 | 16 | 55 | −1 | 44 |
| | 2 | 15 | 56 | 18 | 9 | 12 | 0 | 7 | 27 | 8 | ♋19 | 17 | 43 | ♋19 | 15 | 33 | −2 | 10 |
| | 3 | 16 | 56 | 23 | 9 | 12 | 56 | 8 | 11 | 7 | ♌ 4 | 12 | 40 | ♌ 4 | 9 | 51 | −2 | 49 |
| | 17 | 3 | 49 | 12 | 9 | 25 | 0 | 1 | 24 | 35 | ♒ 1 | 25 | 1 | ♒ 1 | 27 | 4 | +2 | 3 |
| | 20 | 6 | 0 | 42 | 9 | 27 | 47 | 2 | 28 | 39 | ♓ 8 | 4 | 13 | ♓ 8 | 6 | 48 | +2 | 35 |
| | 22 | 7 | 21 | 31 | 9 | 29 | 37 | 3 | 22 | 0 | ♈ 2 | 59 | 48 | ♈ 3 | 01 | 52 | +2 | 4 |
| | 23 | 8 | 3 | 18 | 10 | 0 | 33 | 4 | 4 | 4 | ♈15 | 55 | 36 | ♈15 | 56 | 51 | +1 | 15 |
| | 25 | 9 | 36 | 30 | 10 | 2 | 24 | 4 | 29 | 13 | ♉13 | 8 | 15 | ♉13 | 8 | 22 | +0 | 7 |
| *Nov.* | 27 | 11 | 31 | 37 | 10 | 4 | 17 | 5 | 25 | 52 | ♊12 | 26 | 0 | ♊12 | 23 | 33 | −2 | 27 |
| *Dec.* | 2 | 16 | 39 | 50 | 10 | 8 | 59 | 8 | 6 | 19 | ♌28 | 57 | 3 | ♌28 | 53 | 7 | −3 | 56 |
| | 3 | 17 | 29 | 40 | 10 | 9 | 54 | 8 | 20 | 12 | ♍13 | 38 | 11 | ♍13 | 32 | 41 | −5 | 30 |
| | 6 | 19 | 47 | 37 | 10 | 12 | 42 | 10 | 0 | 1 | ♎25 | 44 | 11 | ♎25 | 38 | 36 | −5 | 35 |
| | 17 | 3 | 56 | 48 | 10 | 22 | 2 | 1 | 25 | 56 | ♓ 3 | 20 | 7 | ♓ 3 | 21 | 39 | +1 | 32 |
| | 18 | 4 | 37 | 0 | 10 | 22 | 57 | 2 | 7 | 13 | ♓15 | 29 | 37 | ♓15 | 31 | 50 | +2 | 13 |
| | 23 | 8 | 14 | 0 | 10 | 27 | 36 | 4 | 7 | 50 | ♉20 | 9 | 26 | ♉20 | 9 | 55 | +0 | 29 |
| | 25 | 10 | 11 | 45 | 10 | 29 | 29 | 5 | 4 | 52 | ♊19 | 33 | 14 | ♊19 | 30 | 52 | −2 | 22 |
| | 26 | 11 | 17 | 37 | 11 | 0 | 25 | 5 | 18 | 59 | ♋ 5 | 1 | 24 | ♋ 4 | 59 | 8 | −2 | 16 |
| *Cent.* | 27 | 12 | 25 | 22 | 11 | 1 | 22 | 6 | 3 | 21 | ♋20 | 49 | 27 | ♋20 | 47 | 15 | −2 | 12 |
| | 29 | 14 | 28 | 38 | 11 | 3 | 15 | 7 | 2 | 17 | ♌22 | 25 | 29 | ♌22 | 23 | 16 | −2 | 13 |
| | 30 | 15 | 22 | 13 | 11 | 4 | 11 | 7 | 16 | 35 | ♍ 7 | 50 | 4 | ♍ 7 | 46 | 59 | −3 | 5 |
| *Dec.* | 31 | 16 | 11 | 52 | 11 | 5 | 7 | 8 | 0 | 39 | ♍22 | 49 | 36 | ♍22 | 45 | 19 | −4 | 17 |

## Anno JULIANO MDCCXXVII. Currente.

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Jan.* | 1 | 16 | 59 | 8 | 11 | 6 | 3 | 8 | 14 | 22 | ♎ 7 | 22 | 0 | ♎ 7 | 16 | 23 | −5 | 37 |
| | 2 | 17 | 45 | 33 | 11 | 6 | 59 | 8 | 27 | 44 | ♎21 | 28 | 33 | ♎21 | 21 | 40 | −6 | 53 |
| | 5 | 20 | 10 | 57 | 11 | 9 | 47 | 10 | 5 | 30 | ♐ 1 | 42 | 38 | ♐ 1 | 37 | 29 | −5 | 9 |
| | 16 | 3 | 54 | 2 | 11 | 19 | 4 | 1 | 27 | 54 | ♈ 5 | 43 | 21 | ♈ 5 | 44 | 17 | +0 | 56 |
| | 18 | 5 | 17 | 4 | 11 | 20 | 55 | 2 | 21 | 32 | ♉ 0 | 57 | 21 | ♉ 0 | 59 | 43 | +2 | 22 |
| | 20 | 6 | 54 | 58 | 11 | 22 | 46 | 3 | 16 | 45 | ♉27 | 46 | 48 | ♉27 | 47 | 40 | +0 | 52 |
| *Cent.* | 25 | 12 | 7 | 43 | 11 | 27 | 27 | 5 | 27 | 1 | ♌13 | 51 | 29 | ♌13 | 49 | 12 | −2 | 17 |
| | 26 | 13 | 6 | 15 | 11 | 28 | 23 | 6 | 11 | 36 | ♌29 | 46 | 48 | ♌29 | 46 | 20 | −0 | 28 |
| *Jan.* | 29 | 15 | 38 | 6 | 0 | 1 | 10 | 7 | 24 | 7 | ♎15 | 39 | 1 | ♎15 | 36 | 20 | −2 | 41 |
| *Feb.* | 1 | 18 | 6 | 30 | 0 | 3 | 57 | 9 | 3 | 24 | ♏27 | 24 | 46 | ♏27 | 19 | 0 | −5 | 46 |

# *LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

Anno JULIANO MDCCXXVII. Currente.

| *Transitûs Limbi Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Distantia ☾ à ☉* | | | *Longitudo Centri Lunæ Observata.* | | | *Longitudo Centri Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Feb.* | 15 | 3 | 59 | 39 | 0 | 15 | 54 | 2 | 1 | 38 | ♉ 9 | 37 | 36 | ♉ 9 | 37 | 21 | —0 | 15 |
| | 17 | 5 | 41 | 30 | 0 | 17 | 44 | 2 | 26 | 46 | ♊ 6 | 25 | 30 | ♊ 6 | 25 | 7 | —0 | 23 |
| | 18 | 6 | 39 | 41 | 0 | 18 | 40 | 3 | 10 | 1 | ♊20 | 29 | 15 | ♊20 | 28 | 30 | —0 | 45 |
| | 20 | 8 | 44 | 40 | 0 | 20 | 31 | 4 | 7 | 44 | ♋20 | 4 | 1 | ♋20 | 1 | 24 | —2 | 37 |
| :::: | 24 | 12 | 34 | 3 | 0 | 24 | 12 | 6 | 5 | 24 | ♍22 | 28 | 28 | ♍22 | 30 | 31 | +2 | 3 |
| | 27 | 15 | 4 | 52 | 0 | 26 | 56 | 7 | 17 | 3 | ♎ 7 | 35 | 39 | ♎ 7 | 34 | 38 | —1 | 1 |
| *Feb.* | 28 | 15 | 56 | 50 | 0 | 27 | 51 | 8 | 0 | 13 | ♎21 | 44 | 15 | ♎21 | 42 | 13 | —2 | 2 |
| *Mart.* | 1 | 16 | 50 | 16 | 0 | 28 | 46 | 8 | 13 | 1 | ♐ 5 | 24 | 7 | ♐ 5 | 22 | 21 | —1 | 46 |
| | 2 | 17 | 44 | 49 | 0 | 29 | 41 | 8 | 25 | 26 | ♐18 | 41 | 5 | ♐18 | 37 | 37 | —3 | 28 |
| | 7 | 21 | 53 | 37 | 1 | 4 | 15 | 10 | 23 | 8 | ♒20 | 59 | 45 | ♒20 | 58 | 23 | —1 | 22 |
| | 14 | 1 | 58 | 10 | 1 | 9 | 39 | 1 | 0 | 47 | ♉ 5 | 37 | 48 | ♉ 5 | 34 | 45 | —3 | 3 |
| | 15 | 2 | 45 | 29 | 1 | 10 | 34 | 1 | 12 | 50 | ♉18 | 45 | 15 | ♉18 | 42 | 46 | —2 | 29 |
| | 16 | 3 | 39 | 34 | 1 | 11 | 28 | 1 | 25 | 16 | ♊ 2 | 11 | 22 | ♊ 2 | 9 | 50 | —1 | 32 |
| | 17 | 4 | 33 | 5 | 1 | 12 | 22 | 2 | 8 | 5 | ♊15 | 54 | 56 | ♊15 | 53 | 25 | —1 | 31 |
| | 18 | 5 | 32 | 31 | 1 | 13 | 17 | 2 | 21 | 18 | ♊29 | 59 | 23 | ♊29 | 57 | 56 | —1 | 27 |
| | 19 | 6 | 33 | 33 | 1 | 14 | 12 | 3 | 4 | 54 | ♋14 | 24 | 36 | ♋14 | 22 | 20 | —2 | 16 |
| | 20 | 7 | 33 | 44 | 1 | 15 | 6 | 3 | 18 | 48 | ♋29 | 7 | 54 | ♋29 | 5 | 4 | —2 | 50 |
| | 21 | 8 | 31 | 24 | 1 | 16 | 1 | 4 | 2 | 55 | ♌14 | 7 | 14 | ♌14 | 4 | 16 | —2 | 58 |
| | 23 | 10 | 17 | 43 | 1 | 17 | 50 | 5 | 1 | 23 | ♍14 | 35 | 40 | ♍14 | 33 | 44 | —1 | 56 |
| | 25 | 11 | 57 | 30 | 1 | 19 | 38 | 5 | 29 | 31 | ♎15 | 5 | 4 | ♎15 | 5 | 3 | —0 | 1 |
| *Mart.* | 27 | 13 | 42 | 29 | 1 | 21 | 26 | 6 | 26 | 42 | ♍14 | 42 | 44 | ♍14 | 43 | 10 | +0 | 26 |
| *Apri.* | 3 | 19 | 49 | 54 | 1 | 27 | 44 | 9 | 21 | 58 | ♒16 | 29 | 28 | ♒16 | 27 | 9 | —2 | 19 |
| | 5 | 21 | 13 | 13 | 1 | 29 | 31 | 10 | 14 | 31 | ♓10 | 49 | 10 | ♓10 | 47 | 45 | —1 | 25 |
| | 7 | 22 | 32 | 45 | 2 | 1 | 18 | 11 | 7 | 9 | ♈ 5 | 32 | 5 | ♈ 5 | 29 | 58 | —2 | 7 |
| | 12 | 1 | 32 | 44 | 2 | 4 | 52 | 0 | 24 | 40 | ♉27 | 51 | 3 | ♉27 | 47 | 46 | —3 | 17 |
| | 27 | 15 | 11 | 4 | 2 | 18 | 15 | 7 | 14 | 56 | ♑ 3 | 23 | 38 | ♑ 3 | 23 | 57 | +0 | 19 |
| | 28 | 16 | 5 | 28 | 2 | 19 | 8 | 7 | 26 | 57 | ♑16 | 24 | 51 | ♑16 | 24 | 25 | —0 | 26 |
| | 29 | 16 | 56 | 34 | 2 | 20 | 1 | 8 | 8 | 45 | ♑29 | 6 | 54 | ♑29 | 5 | 54 | —1 | 0 |
| *Apri.* | 30 | 17 | 43 | 53 | 2 | 20 | 54 | 8 | 20 | 21 | ♒11 | 32 | 36 | ♒11 | 30 | 53 | —1 | 43 |
| *Maii.* | 6 | 21 | 51 | 17 | 2 | 26 | 11 | 10 | 29 | 33 | ♈25 | 49 | 5 | ♈25 | 46 | 17 | —2 | 48 |
| | 7 | 22 | 36 | 55 | 2 | 27 | 4 | 11 | 11 | 36 | ♉ 8 | 59 | 17 | ♉ 8 | 56 | 55 | —2 | 22 |
| | 12 | 2 | 20 | 13 | 3 | 0 | 37 | 1 | 2 | 57 | ♋ 5 | 17 | 25 | ♋ 5 | 16 | 26 | —0 | 59 |
| | 13 | 3 | 21 | 43 | 3 | 1 | 30 | 1 | 16 | 33 | ♋19 | 58 | 41 | ♋19 | 58 | 29 | —0 | 12 |
| | 14 | 4 | 20 | 36 | 3 | 2 | 23 | 2 | 0 | 21 | ♌ 4 | 42 | 52 | ♌ 4 | 43 | 28 | +0 | 36 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVII. Currente.

| Tranſitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Diſtantia ☾ à ☉ | | | Longitudo Centri Lunæ Obſervata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Maii.* | 15 | 5 | 15 | 42 | 3 | 3 | 16 | 2 | 14 | 16 | ♌19 | 26 | 50 | ♌19 | 26 | 49 | —0 | 1 |
| | 16 | 6 | 7 | 4 | 3 | 4 | 9 | 2 | 28 | 13 | ♍ 4 | 6 | 35 | ♍ 4 | 6 | 19 | —0 | 16 |
| | 18 | 7 | 42 | 56 | 3 | 5 | 56 | 3 | 25 | 52 | ♎ 3 | 12 | 52 | ♎ 3 | 11 | 31 | —1 | 21 |
| | 19 | 8 | 30 | 11 | 3 | 6 | 47 | 4 | 9 | 29 | ♎17 | 38 | 21 | ♎17 | 37 | 2 | —1 | 19 |
| *Cent.* | 20 | 9 | 23 | 10 | 3 | 7 | 40 | 4 | 22 | 58 | ♏ 2 | 0 | 40 | ♏ 1 | 59 | 47 | —0 | 53 |
| | 21 | 10 | 9 | 43 | 3 | 8 | 33 | 5 | 5 | 58 | ♏16 | 10 | 8 | ♏16 | 9 | 54 | —0 | 14 |
| | 22 | 11 | 3 | 24 | 3 | 9 | 26 | 5 | 18 | 47 | ♐ 0 | 11 | 58 | ♐ 0 | 12 | 29 | +0 | 31 |
| | 26 | 14 | 47 | 22 | 3 | 12 | 58 | 7 | 7 | 27 | ♑23 | 45 | 53 | ♑23 | 44 | 48 | —1 | 5 |
| *Maii.* | 30 | 17 | 44 | 45 | 3 | 16 | 28 | 8 | 23 | 18 | ♓13 | 9 | 11 | ♓13 | 6 | 28 | —2 | 43 |
| *Junii.* | 1 | 19 | 3 | 25 | 3 | 18 | 12 | 9 | 16 | 21 | ♈ 7 | 38 | 2 | ♈ 7 | 35 | 42 | —2 | 20 |
| | 2 | 19 | 44 | 21 | 3 | 19 | 5 | 9 | 28 | 7 | ♈20 | 11 | 43 | ♈20 | 9 | 11 | —2 | 32 |
| | 3 | 20 | 28 | 4 | 3 | 19 | 57 | 10 | 10 | 9 | ♉ 3 | 5 | 37 | ♉ 3 | 3 | 12 | —2 | 25 |
| | 12 | 4 | 3 | 14 | 3 | 27 | 0 | 1 | 27 | 24 | ♌29 | 25 | 50 | ♌29 | 28 | 6 | +2 | 16 |
| | 13 | 4 | 53 | 22 | 3 | 27 | 53 | 2 | 11 | 28 | ♍14 | 16 | 03 | ♍14 | 18 | 22 | +2 | 19 |
| | 14 | 5 | 41 | 9 | 3 | 28 | 45 | 2 | 25 | 24 | ♍28 | 53 | 11 | ♍28 | 55 | 20 | +2 | 9 |
| | 17 | 8 | 5 | 6 | 4 | 1 | 23 | 4 | 5 | 47 | ♎11 | 31 | 55 | ♎11 | 33 | 12 | +1 | 17 |
| | 18 | 8 | 56 | 55 | 4 | 2 | 15 | 4 | 18 | 38 | ♎25 | 22 | 33 | ♎25 | 23 | 26 | +0 | 53 |
| *Cent.* | 19 | 9 | 52 | 20 | 4 | 3 | 8 | 5 | 1 | 12 | ♐ 9 | 0 | 33 | ♐ 9 | 3 | 0 | +2 | 27 |
| | 20 | 10 | 47 | 9 | 4 | 4 | 1 | 5 | 13 | 27 | ♐22 | 30 | 22 | ♐22 | 30 | 54 | +0 | 32 |
| | 21 | 11 | 43 | 0 | 4 | 4 | 54 | 5 | 25 | 25 | ♑ 5 | 43 | 24 | ♑ 5 | 44 | 23 | +0 | 59 |
| | 24 | 14 | 16 | 46 | 4 | 7 | 31 | 7 | 0 | 1 | ♒13 | 57 | 16 | ♒13 | 55 | 46 | —1 | 30 |
| | 29 | 17 | 39 | 0 | 4 | 11 | 53 | 8 | 26 | 43 | ♈14 | 58 | 17 | ♈14 | 55 | 36 | —2 | 41 |
| *Junii.* | 30 | 18 | 20 | 37 | 4 | 12 | 45 | 9 | 8 | 31 | ♈27 | 30 | 9 | ♈27 | 27 | 39 | —2 | 30 |
| *Julii.* | 1 | 19 | 5 | 42 | 4 | 13 | 38 | 9 | 20 | 38 | ♉10 | 24 | 15 | ♉10 | 20 | 56 | —3 | 19 |
| | 2 | 19 | 55 | 23 | 4 | 14 | 30 | 10 | 3 | 7 | ♉23 | 45 | 38 | ♉23 | 42 | 21 | —3 | 17 |
| | 11 | 3 | 36 | 34 | 4 | 21 | 34 | 1 | 24 | 10 | ♍23 | 45 | 27 | ♍23 | 48 | 29 | +3 | 2 |
| *Cent.* | 14 | 6 | 3 | 27 | 4 | 24 | 12 | 3 | 5 | 31 | ♏ 7 | 19 | 52 | ♏ 7 | 22 | 48 | +2 | 56 |
| | 19 | 10 | 31 | 18 | 4 | 28 | 37 | 5 | 7 | 38 | ♑14 | 17 | 52 | ♑14 | 21 | 26 | +3 | 34 |
| | 20 | 11 | 22 | 37 | 4 | 29 | 29 | 5 | 19 | 7 | ♑27 | 0 | 15 | ♑27 | 3 | 12 | +2 | 57 |
| | 21 | 12 | 12 | 50 | 5 | 0 | 22 | 6 | 0 | 25 | ♒ 9 | 31 | 35 | ♒ 9 | 33 | 53 | +2 | 18 |
| | 23 | 13 | 39 | 0 | 5 | 2 | 7 | 6 | 22 | 36 | ♓ 4 | 3 | 33 | ♓ 4 | 3 | 44 | +0 | 11 |
| | 24 | 14 | 18 | 45 | 5 | 3 | 0 | 7 | 3 | 39 | ♓16 | 11 | 57 | ♓16 | 10 | 0 | —1 | 57 |
| | 26 | 15 | 36 | 25 | 5 | 4 | 45 | 7 | 26 | 0 | ♈10 | 27 | 18 | ♈10 | 24 | 12 | —3 | 6 |
| | 27 | 16 | 16 | 38 | 5 | 5 | 37 | 8 | 7 | 27 | ♈22 | 44 | 8 | ♈22 | 41 | 31 | —2 | 37 |

# LUNÆ MERIDIANÆ LONGITUDINES
## GRENOVICI OBSERVATÆ
## CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVII. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| | 28 | 16 | 59 | 26 | 5 | 6 | 30 | 8 | 19 | 12 | ♉ 5 | 15 | 38 | ♉ 5 | 12 | 49 | −2 | 49 |
| *Julii.* | 31 | 19 | 33 | 41 | 5 | 9 | 9 | 9 | 26 | 41 | ♊15 | 13 | 24 | ♊15 | 7 | 22 | −6 | 2 |
| *Aug.* | 1 | 20 | 34 | 23 | 5 | 10 | 3 | 10 | 10 | 4 | ♊29 | 33 | 45 | ♊29 | 27 | 12 | −6 | 33 |
| | 3 | 22 | 39 | 34 | 5 | 11 | 50 | 11 | 7 | 59 | ♋29 | 43 | 46 | ♋29 | 38 | 5 | −5 | 41 |
| | 8 | 2 | 16 | 7 | 5 | 15 | 23 | 1 | 5 | 51 | ♎ 2 | 14 | 19 | ♎ 2 | 15 | 23 | +1 | 4 |
| :::: | 9 | 3 | 8 | 50 | 5 | 16 | 16 | 1 | 20 | 6 | ♎17 | 25 | 20 | ♎17 | 28 | 32 | +3 | 12 |
| | 10 | 3 | 56 | 20 | 5 | 17 | 9 | 2 | 4 | 0 | ♏ 2 | 10 | 46 | ♏ 2 | 14 | 20 | +3 | 34 |
| | 11 | 4 | 48 | 14 | 5 | 18 | 2 | 2 | 17 | 34 | ♏16 | 33 | 19 | ♏16 | 36 | 41 | +3 | 22 |
| | 12 | 5 | 42 | 0 | 5 | 18 | 56 | 3 | 0 | 45 | ♐ 0 | 31 | 30 | ♐ 0 | 34 | 31 | +3 | 1 |
| | 13 | 6 | 37 | 11 | 5 | 19 | 49 | 3 | 13 | 32 | ♐14 | 6 | 29 | ♐14 | 9 | 54 | +3 | 25 |
| | 14 | 7 | 32 | 49 | 5 | 20 | 43 | 3 | 25 | 55 | ♐27 | 21 | 3 | ♐27 | 25 | 3 | +4 | 0 |
| | 16 | 9 | 19 | 24 | 5 | 22 | 29 | 4 | 19 | 36 | ♑22 | 59 | 50 | ♑23 | 4 | 25 | +4 | 35 |
| | 17 | 10 | 8 | 11 | 5 | 23 | 23 | 5 | 1 | 0 | ♒ 5 | 29 | 43 | ♒ 5 | 33 | 31 | +3 | 48 |
| | 18 | 10 | 53 | 32 | 5 | 24 | 16 | 5 | 12 | 10 | ♒17 | 49 | 8 | ♒17 | 52 | 15 | +3 | 7 |
| | 19 | 11 | 35 | 56 | 5 | 25 | 9 | 5 | 25 | 51 | ♓ 0 | 1 | 35 | ♓ 0 | 3 | 27 | +1 | 52 |
| | 20 | 12 | 18 | 10 | 5 | 26 | 2 | 6 | 4 | 9 | ♓12 | 9 | 55 | ♓12 | 11 | 9 | +1 | 14 |
| | 22 | 13 | 35 | 54 | 5 | 27 | 48 | 6 | 26 | 6 | ♈ 6 | 25 | 23 | ♈ 6 | 23 | 41 | −1 | 42 |
| | 23 | 14 | 15 | 31 | 5 | 28 | 42 | 7 | 7 | 15 | ♈18 | 38 | 58 | ♈18 | 36 | 40 | −2 | 18 |
| | 24 | 14 | 57 | 5 | 5 | 29 | 35 | 7 | 18 | 37 | ♉ 1 | 1 | 31 | ♉ 0 | 58 | 43 | −2 | 48 |
| | 25 | 15 | 41 | 38 | 6 | 0 | 28 | 8 | 0 | 17 | ♉13 | 36 | 40 | ♉13 | 34 | 0 | −2 | 40 |
| | 26 | 16 | 30 | 12 | 6 | 1 | 22 | 8 | 12 | 18 | ♉26 | 30 | 2 | ♉26 | 26 | 51 | −3 | 11 |
| *Aug.* | 30 | 20 | 21 | 30 | 6 | 4 | 57 | 10 | 4 | 36 | ♋22 | 14 | 57 | ♋22 | 8 | 19 | −6 | 38 |
| *Sept.* | 1 | 22 | 17 | 41 | 6 | 6 | 45 | 11 | 3 | 1 | ♌22 | 45 | 50 | ♌22 | 39 | 16 | −6 | 34 |
| | 8 | 3 | 32 | 6 | 6 | 12 | 9 | 1 | 28 | 27 | ♍24 | 54 | 15 | ♍24 | 56 | 2 | +1 | 47 |
| | 9 | 4 | 28 | 36 | 6 | 13 | 3 | 2 | 11 | 42 | ♐ 9 | 2 | 36 | ♐ 9 | 4 | 55 | +2 | 19 |
| | 11 | 6 | 21 | 47 | 6 | 14 | 52 | 3 | 6 | 59 | ♑ 5 | 59 | 1 | ♑ 6 | 1 | 53 | +2 | 52 |
| | 12 | 7 | 15 | 16 | 6 | 15 | 46 | 3 | 19 | 2 | ♑18 | 51 | 57 | ♑18 | 55 | 10 | +3 | 13 |
| | 14 | 8 | 51 | 39 | 6 | 17 | 34 | 4 | 2 | 9 | ♒13 | 48 | 40 | ♒13 | 52 | 3 | +3 | 23 |
| | 15 | 9 | 34 | 49 | 6 | 18 | 28 | 4 | 23 | 21 | ♒26 | 1 | 8 | ♒26 | 4 | 27 | +3 | 19 |
| | 16 | 10 | 15 | 34 | 6 | 19 | 22 | 5 | 4 | 24 | ♓ 8 | 8 | 41 | ♓ 8 | 11 | 48 | +3 | 7 |
| *Cent.* | 18 | 11 | 34 | 42 | 6 | 21 | 9 | 5 | 26 | 21 | ♈ 2 | 25 | 41 | ♈ 2 | 26 | 41 | +1 | 0 |
| :: | 20 | 12 | 56 | 14 | 6 | 22 | 57 | 6 | 18 | 34 | ♈27 | 4 | 34 | ♈27 | 3 | 25 | −1 | 9 |
| | 21 | 13 | 39 | 56 | 6 | 23 | 51 | 6 | 29 | 58 | ♉ 9 | 38 | 20 | ♉ 9 | 36 | 50 | −1 | 30 |
| | 22 | 14 | 27 | 11 | 6 | 24 | 46 | 7 | 11 | 38 | ♉22 | 26 | 5 | ♉22 | 23 | 57 | −2 | 8 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVII. Currente.

| Tranſitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Diſtantia ☾ à ☉ | | | Longitudo Centri Lunæ Obſervata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| Sept. | 23 | 15 | 18 | 30 | 6 | 25 | 40 | 7 | 23 | 39 | ♊ 5 | 29 | 39 | ♊ 5 | 26 | 57 | −2 | 42 |
| | 24 | 16 | 13 | 32 | 6 | 26 | 35 | 8 | 6 | 2 | ♊18 | 49 | 58 | ♊18 | 47 | 39 | −2 | 19 |
| | 25 | 17 | 11 | 28 | 6 | 27 | 29 | 8 | 18 | 50 | ♋ 2 | 30 | 58 | ♋ 2 | 27 | 56 | −3 | 2 |
| ♎ | 26 | 18 | 10 | 22 | 6 | 28 | 24 | 9 | 2 | 2 | ♋16 | 31 | 56 | ♋16 | 28 | 47 | −3 | 9 |
| Sept. | 27 | 19 | 8 | 15 | 6 | 29 | 19 | 9 | 15 | 37 | ♌ 0 | 54 | 54 | ♌ 0 | 50 | 50 | −4 | 4 |
| Octo. | ♎ 1 | 22 | 39 | 30 | 7 | 2 | 58 | 11 | 12 | 19 | ♍ 1 | 30 | 48 | ♍ 1 | 27 | 34 | −3 | 14 |
| | 8 | 4 | 11 | 0 | 7 | 8 | 27 | 2 | 4 | 21 | ♍ 0 | 32 | 44 | ♍ 0 | 34 | 37 | +1 | 53 |
| | 10 | 5 | 59 | 24 | 7 | 10 | 17 | 2 | 29 | 3 | ♍26 | 48 | 34 | ♍26 | 50 | 9 | +1 | 35 |
| | 12 | 7 | 32 | 8 | 7 | 12 | 7 | 3 | 22 | 11 | ♒21 | 42 | 34 | ♒21 | 43 | 15 | +0 | 41 |
| | 13 | 8 | 13 | 40 | 7 | 13 | 1 | 4 | 3 | 29 | ♓ 3 | 51 | 18 | ♓ 3 | 53 | 11 | +1 | 53 |
| ♎ | 14 | 8 | 53 | 25 | 7 | 13 | 56 | 4 | 14 | 40 | ♓15 | 58 | 22 | ♓15 | 59 | 42 | +1 | 20 |
| | 17 | 10 | 52 | 10 | 7 | 16 | 40 | 5 | 18 | 6 | ♈22 | 44 | 51 | ♈22 | 44 | 37 | −0 | 14 |
| | 20 | 13 | 14 | 34 | 7 | 19 | 25 | 6 | 22 | 51 | ♊ 1 | 20 | 49 | ♊ 1 | 18 | 53 | −1 | 56 |
| | 21 | 14 | 9 | 5 | 7 | 20 | 20 | 7 | 5 | 0 | ♊14 | 43 | 52 | ♊14 | 41 | 21 | −2 | 31 |
| ♎ | 22 | 15 | 6 | 19 | 7 | 21 | 16 | 7 | 17 | 30 | ♊28 | 19 | 19 | ♊28 | 18 | 53 | −0 | 26 |
| | 26 | 18 | 49 | 48 | 7 | 24 | 58 | 9 | 10 | 45 | ♌25 | 1 | 48 | ♌24 | 58 | 27 | −3 | 21 |
| | 27 | 19 | 39 | 55 | 7 | 25 | 53 | 9 | 24 | 40 | ♍ 9 | 43 | 17 | ♍ 9 | 39 | 6 | −4 | 11 |
| Octo. | 29 | 21 | 18 | 1 | 7 | 27 | 44 | 10 | 22 | 46 | ♎ 9 | 39 | 27 | ♎ 9 | 35 | 22 | −4 | 5 |
| Nov. | 8 | 5 | 26 | 32 | 8 | 6 | 5 | 2 | 19 | 32 | ♒16 | 44 | 52 | ♒16 | 45 | 26 | +0 | 34 |
| | 12 | 8 | 8 | 0 | 8 | 9 | 46 | 4 | 5 | 4 | ♈ 5 | 29 | 50 | ♈ 5 | 29 | 14 | −0 | 36 |
| | 13 | 8 | 47 | 54 | 8 | 10 | 41 | 4 | 16 | 25 | ♈17 | 48 | 7 | ♈17 | 49 | 30 | +1 | 23 |
| | 14 | 9 | 30 | 2 | 8 | 11 | 36 | 4 | 27 | 51 | ♉ 0 | 19 | 34 | ♉ 0 | 20 | 18 | +0 | 44 |
| | 15 | 10 | 15 | 25 | 8 | 12 | 32 | 5 | 9 | 28 | ♉13 | 10 | 18 | ♉13 | 9 | 23 | −0 | 55 |
| | 16 | 11 | 4 | 54 | 8 | 13 | 28 | 5 | 21 | 19 | ♉26 | 18 | 39 | ♉26 | 18 | 58 | +0 | 19 |
| | 17 | 12 | 1 | 22 | 8 | 14 | 24 | 6 | 3 | 27 | ♊ 9 | 50 | 40 | ♊ 9 | 48 | 7 | −2 | 33 |
| Nov. | 22 | 16 | 46 | 40 | 8 | 19 | 4 | 8 | 8 | 33 | ♌20 | 39 | 55 | ♌20 | 38 | 24 | −1 | 31 |
| Dec. | 5 | 3 | 18 | 18 | 9 | 0 | 16 | 1 | 16 | 15 | ♒11 | 14 | 6 | ♒11 | 13 | 18 | −0 | 48 |
| | 6 | 4 | 3 | 20 | 9 | 1 | 12 | 1 | 27 | 53 | ♒23 | 49 | 53 | ♒23 | 48 | 49 | −1 | 4 |
| | 7 | 4 | 45 | 6 | 9 | 2 | 8 | 2 | 9 | 21 | ♓ 6 | 9 | 36 | ♓ 6 | 8 | 41 | −0 | 55 |
| | 12 | 8 | 6 | 48 | 9 | 6 | 46 | 4 | 6 | 36 | ♉ 7 | 29 | 6 | ♉ 7 | 28 | 58 | −0 | 8 |
| | 13 | 8 | 54 | 17 | 9 | 7 | 42 | 4 | 18 | 29 | ♉20 | 25 | 38 | ♉20 | 24 | 44 | −0 | 54 |
| | 14 | 9 | 46 | 26 | 9 | 8 | 38 | 5 | 0 | 38 | ♊ 3 | 46 | 48 | ♊ 3 | 44 | 49 | −1 | 59 |
| | 15 | 10 | 43 | 7 | 9 | 9 | 34 | 5 | 13 | 6 | ♊17 | 33 | 14 | ♊17 | 30 | 34 | −2 | 40 |
| | 17 | 12 | 46 | 17 | 9 | 11 | 27 | 6 | 9 | 1 | ♋16 | 13 | 35 | ♋16 | 10 | 40 | −2 | 55 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

## Anno JULIANO MDCCXXVII. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| Dec. | 18 | 13 | 45 | 21 | 9 | 12 | 23 | 6 | 22 | 23 | ☊ 0 | 55 | 37 | ☊ 0 | 52 | 36 | −3 | 1 |
| | 19 | 14 | 41 | 4 | 9 | 13 | 20 | 7 | 6 | 0 | ☊15 | 42 | 40 | ☊15 | 40 | 35 | −2 | 5 |
| | 21 | 16 | 22 | 42 | 9 | 15 | 12 | 8 | 3 | 37 | ♍15 | 15 | 28 | ♍15 | 13 | 11 | −2 | 17 |
| | 25 | 19 | 38 | 36 | 9 | 18 | 56 | 9 | 28 | 32 | ♏13 | 17 | 18 | ♏13 | 14 | 43 | −2 | 35 |
| Dec. | 26 | 20 | 32 | 53 | 9 | 19 | 52 | 10 | 11 | 47 | ♏27 | 31 | 48 | ♏27 | 29 | 2 | −2 | 46 |

## Anno JULIANO MDCCXXVIII. Currente.

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan. | 3 | 2 | 39 | 45 | 9 | 26 | 24 | 1 | 6 | 34 | ♓ 0 | 59 | 50 | ♓ 0 | 58 | 31 | −1 | 19 |
| | 8 | 5 | 59 | 17 | 10 | 1 | 2 | 3 | 3 | 10 | ♉ 1 | 58 | 40 | ♉ 1 | 59 | 32 | +0 | 52 |
| | 9 | 6 | 44 | 9 | 10 | 1 | 58 | 3 | 14 | 54 | ♉14 | 32 | 55 | ♉14 | 33 | 9 | +0 | 14 |
| | 10 | 7 | 33 | 14 | 10 | 2 | 54 | 3 | 26 | 55 | ♉27 | 28 | 32 | ♉27 | 28 | 2 | −0 | 30 |
| | 11 | 8 | 27 | 3 | 10 | 3 | 50 | 4 | 9 | 16 | ♊10 | 50 | 30 | ♊10 | 49 | 12 | −1 | 18 |
| | 12 | 9 | 25 | 5 | 10 | 4 | 46 | 4 | 21 | 59 | ♊24 | 41 | 9 | ♊24 | 39 | 20 | −1 | 49 |
| | 14 | 11 | 26 | 37 | 10 | 6 | 39 | 5 | 18 | 30 | ♋23 | 44 | 54 | ♋23 | 42 | 55 | −1 | 59 |
| | 15 | 12 | 27 | 32 | 10 | 7 | 35 | 6 | 2 | 15 | ☊ 8 | 49 | 10 | ☊ 8 | 47 | 57 | −1 | 13 |
| | 16 | 13 | 22 | 53 | 10 | 8 | 31 | 6 | 16 | 11 | ☊24 | 3 | 2 | ☊24 | 2 | 27 | −0 | 35 |
| | 17 | 14 | 15 | 6 | 10 | 9 | 27 | 7 | 0 | 16 | ♍ 9 | 19 | 44 | ♍ 9 | 19 | 39 | −0 | 5 |
| | 19 | 15 | 54 | 16 | 10 | 11 | 18 | 7 | 28 | 31 | ♎ 9 | 34 | 25 | ♎ 9 | 34 | 13 | −0 | 12 |
| :: | 20 | 16 | 46 | 14 | 10 | 12 | 14 | 8 | 12 | 31 | ♎24 | 26 | 18 | ♎24 | 23 | 58 | −2 | 20 |
| | 21 | 17 | 35 | 10 | 10 | 13 | 10 | 8 | 26 | 15 | ♏ 8 | 58 | 56 | ♏ 8 | 55 | 43 | −3 | 13 |
| | 23 | 19 | 24 | 54 | 10 | 15 | 2 | 9 | 22 | 56 | ♐ 7 | 21 | 25 | ♐ 7 | 16 | 22 | −5 | 3 |
| Jan. | 24 | 20 | 22 | 20 | 10 | 15 | 57 | 10 | 5 | 45 | ♐21 | 8 | 43 | ♐21 | 4 | 13 | −4 | 30 |
| Feb. | 3 | 3 | 14 | 32 | 10 | 24 | 16 | 1 | 19 | 15 | ♈15 | 1 | 50 | ♈14 | 59 | 53 | −1 | 57 |
| | 4 | 3 | 54 | 58 | 10 | 25 | 11 | 2 | 0 | 35 | ♈27 | 11 | 24 | ♈27 | 10 | 0 | −1 | 24 |
| | 5 | 4 | 37 | 50 | 10 | 26 | 7 | 2 | 11 | 54 | ♉ 9 | 28 | 52 | ♉ 9 | 28 | 24 | −0 | 28 |
| Cent. :: | 8 | 7 | 10 | 34 | 10 | 28 | 53 | 3 | 18 | 1 | ♊18 | 8 | 3 | ♊18 | 7 | 46 | −0 | 17 |
| Cent. :: | 9 | 8 | 9 | 54 | 10 | 29 | 48 | 4 | 0 | 50 | ♋ 1 | 51 | 46 | ♋ 1 | 52 | 9 | +0 | 23 |
| | 10 | 9 | 7 | 0 | 11 | 0 | 44 | 4 | 14 | 6 | ♋16 | 4 | 3 | ♋16 | 4 | 20 | +0 | 17 |
| Cent. :: | 13 | 11 | 58 | 53 | 11 | 3 | 31 | 5 | 25 | 46 | ♍ 1 | 22 | 30 | ♍ 1 | 23 | 25 | +0 | 55 |
| Cent. | 14 | 12 | 52 | 20 | 11 | 4 | 26 | 6 | 10 | 7 | ♍16 | 59 | 54 | ♍17 | 1 | 48 | +1 | 54 |
| :: | 17 | 15 | 29 | 45 | 11 | 7 | 12 | 7 | 23 | 8 | ♎ 3 | 25 | 5 | ♎ 3 | 25 | 27 | +0 | 22 |
| | 18 | 16 | 22 | 7 | 11 | 8 | 7 | 8 | 7 | 4 | ♍18 | 18 | 30 | ♍18 | 16 | 42 | −1 | 48 |
| | 19 | 17 | 18 | 56 | 11 | 9 | 2 | 8 | 20 | 41 | ♐ 2 | 48 | 31 | ♐ 2 | 45 | 24 | −3 | 7 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVIII. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Mart.* | 2 | 1 | 53 | 21 | 11 | 19 | 5 | 0 | 29 | 18 | ♈23 | 0 | 6 | ♈22 | 55 | 45 | −4 | 21 |
| | 6 | 5 | 0 | 12 | 11 | 22 | 43 | 2 | 15 | 19 | ♊12 | 58 | 32 | ♊12 | 57 | 17 | −1 | 15 |
| | 7 | 5 | 55 | 27 | 11 | 23 | 38 | 2 | 27 | 39 | ♊26 | 8 | 58 | ♊26 | 8 | 20 | −0 | 38 |
| | 8 | 6 | 52 | 39 | 11 | 24 | 33 | 3 | 10 | 25 | ♋ 9 | 42 | 49 | ♋ 9 | 42 | 55 | +0 | 6 |
| | 9 | 7 | 50 | 11 | 11 | 25 | 27 | 3 | 23 | 36 | ♋23 | 44 | 20 | ♋23 | 43 | 44 | −0 | 36 |
| | 11 | 9 | 40 | 55 | 11 | 27 | 17 | 4 | 21 | 9 | ♌23 | 9 | 5 | ♌23 | 8 | 37 | −0 | 28 |
| | 12 | 10 | 33 | 32 | 11 | 28 | 11 | 5 | 5 | 23 | ♍ 8 | 29 | 5 | ♍ 8 | 29 | 13 | +0 | 8 |
| | 13 | 11 | 25 | 5 | 11 | 29 | 6 | 5 | 19 | 51 | ♍24 | 6 | 31 | ♍24 | 8 | 12 | +1 | 41 |
| | 17 | 15 | 6 | 13 | 0 | 2 | 44 | 7 | 17 | 25 | ♎26 | 33 | 22 | ♎26 | 34 | 50 | +1 | 28 |
| | 18 | 16 | 6 | 13 | 0 | 3 | 38 | 8 | 1 | 12 | ♐11 | 20 | 26 | ♐11 | 21 | 13 | +0 | 47 |
| | 19 | 17 | 6 | 26 | 0 | 4 | 33 | 8 | 14 | 34 | ♐25 | 38 | 44 | ♐25 | 36 | 57 | −1 | 47 |
| | 23 | 20 | 34 | 53 | 0 | 8 | 10 | 10 | 3 | 47 | ♒18 | 10 | 4 | ♒18 | 6 | 5 | −3 | 59 |
| *Mart.* | 24 | 21 | 17 | 28 | 0 | 9 | 4 | 10 | 15 | 12 | ♓ 0 | 30 | 35 | ♓ 0 | 26 | 34 | −4 | 1 |
| *Apri.* | 2 | 2 | 55 | 55 | 0 | 16 | 13 | 1 | 14 | 24 | ♊ 8 | 51 | 2 | ♊ 8 | 48 | 44 | −2 | 18 |
| | 6 | 6 | 36 | 19 | 0 | 19 | 49 | 3 | 4 | 25 | ♌ 2 | 21 | 47 | ♌ 2 | 21 | 3 | −0 | 44 |
| | 7 | 7 | 29 | 27 | 0 | 20 | 43 | 3 | 17 | 55 | ♌16 | 35 | 25 | ♌16 | 34 | 43 | −0 | 42 |
| | 10 | 10 | 1 | 23 | 0 | 23 | 24 | 5 | 0 | 15 | ♎ 1 | 37 | 36 | ♎ 1 | 37 | 13 | −0 | 23 |
| | 11 | 10 | 53 | 6 | 0 | 24 | 18 | 5 | 14 | 43 | ♎17 | 15 | 24 | ♎17 | 15 | 45 | +0 | 21 |
| *Cent.* | 12 | 11 | 48 | 32 | 0 | 25 | 12 | 5 | 29 | 12 | ♏ 2 | 59 | 13 | ♏ 3 | 1 | 25 | +2 | 12 |
| | 14 | 13 | 48 | 17 | 0 | 26 | 59 | 6 | 27 | 41 | ♐ 4 | 3 | 38 | ♐ 4 | 6 | 27 | +2 | 49 |
| | 15 | 14 | 50 | 33 | 0 | 27 | 53 | 7 | 11 | 30 | ♐19 | 2 | 24 | ♐19 | 4 | 57 | +2 | 33 |
| | 17 | 16 | 49 | 48 | 0 | 29 | 41 | 8 | 7 | 54 | ♑17 | 26 | 20 | ♑17 | 24 | 38 | −1 | 42 |
| | 18 | 17 | 42 | 55 | 1 | 0 | 34 | 8 | 20 | 27 | ♒ 0 | 48 | 53 | ♒ 0 | 45 | 53 | −3 | 0 |
| | 21 | 19 | 56 | 30 | 1 | 3 | 14 | 9 | 25 | 57 | ♓ 8 | 34 | 51 | ♓ 8 | 30 | 36 | −4 | 15 |
| | 22 | 20 | 35 | 51 | 1 | 4 | 7 | 10 | 7 | 15 | ♓20 | 43 | 50 | ♓20 | 39 | 48 | −4 | 2 |
| | 23 | 21 | 14 | 33 | 1 | 5 | 0 | 10 | 18 | 25 | ♈ 2 | 49 | 10 | ♈ 2 | 46 | 1 | −3 | 9 |
| | 24 | 21 | 53 | 42 | 1 | 5 | 52 | 10 | 29 | 30 | ♈14 | 55 | 48 | ♈14 | 53 | 16 | −2 | 32 |
| *Apri.* | 30 | 1 | 45 | 27 | 1 | 10 | 18 | 0 | 26 | 16 | ♊17 | 45 | 38 | ♊17 | 42 | 23 | −3 | 15 |
| *Maii.* | 4 | 5 | 24 | 20 | 1 | 13 | 51 | 2 | 16 | 32 | ♌11 | 49 | 51 | ♌11 | 50 | 6 | +0 | 15 |
| | 5 | 6 | 14 | 48 | 1 | 14 | 44 | 2 | 29 | 57 | ♌25 | 57 | 30 | ♌25 | 57 | 30 | +0 | 0 |
| | 6 | 7 | 3 | 39 | 1 | 15 | 37 | 3 | 13 | 41 | ♍10 | 22 | 18 | ♍10 | 22 | 8 | −0 | 10 |
| | 7 | 7 | 52 | 0 | 1 | 16 | 30 | 3 | 27 | 44 | ♍25 | 6 | 21 | ♍25 | 5 | 0 | −1 | 21 |
| | 8 | 8 | 41 | 11 | 1 | 17 | 23 | 4 | 11 | 50 | ♎10 | 7 | 27 | ♎10 | 6 | 12 | −1 | 15 |
| | 9 | 9 | 32 | 39 | 1 | 18 | 16 | 4 | 26 | 5 | ♎25 | 23 | 49 | ♎25 | 22 | 43 | −1 | 6 |

# *LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

Anno JULIANO MDCCXXVIII. Currente.

| *Transitus Limbi Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Distantia ☾ à ☉* | | | *Longitudo Centri Lunæ Observata.* | | | *Longitudo Centri Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Maii.* | 10 | 10 | 27 | 30 | 1 | 19 | 9 | 5 | 10 | 20 | ♍10 | 48 | 16 | ♍10 | 48 | 24 | +0 | 8 |
| *Cent.* | 24 | 21 | 58 | 15 | 2 | 1 | 28 | 11 | 3 | 8 | ♉17 | 28 | 28 | ♉17 | 24 | 24 | −4 | 4 |
| *Junii.* | 1 | 4 | 12 | 16 | 2 | 7 | 38 | 1 | 29 | 28 | ♌21 | 42 | 25 | ♌21 | 43 | 56 | +1 | 31 |
| | 4 | 6 | 36 | 12 | 2 | 10 | 16 | 3 | 10 | 32 | ♎4 | 55 | 22 | ♎4 | 55 | 7 | −0 | 15 |
| | 5 | 7 | 25 | 10 | 2 | 11 | 8 | 3 | 24 | 32 | ♎19 | 40 | 25 | ♎19 | 39 | 46 | −0 | 39 |
| | 6 | 8 | 16 | 57 | 2 | 12 | 1 | 4 | 8 | 33 | ♏4 | 34 | 50 | ♏4 | 34 | 0 | −0 | 50 |
| | 9 | 11 | 13 | 47 | 2 | 14 | 40 | 5 | 19 | 58 | ♐19 | 27 | 41 | ♐19 | 27 | 53 | +0 | 12 |
| *Cent.* | 10 | 12 | 17 | 1 | 2 | 15 | 33 | 6 | 3 | 19 | ♑4 | 6 | 2 | ♑4 | 5 | 44 | −0 | 18 |
| | 15 | 16 | 28 | 33 | 2 | 19 | 56 | 8 | 5 | 4 | ♓11 | 5 | 46 | ♓11 | 1 | 21 | −4 | 25 |
| | 16 | 17 | 8 | 27 | 2 | 20 | 48 | 8 | 16 | 39 | ♓23 | 27 | 36 | ♓23 | 22 | 35 | −5 | 1 |
| | 17 | 17 | 47 | 36 | 2 | 21 | 40 | 8 | 28 | 8 | ♈5 | 38 | 53 | ♈5 | 34 | 56 | −3 | 57 |
| | 21 | 20 | 40 | 10 | 2 | 25 | 10 | 10 | 14 | 7 | ♉25 | 0 | 43 | ♉24 | 57 | 47 | −2 | 56 |
| | 22 | 21 | 31 | 41 | 2 | 26 | 2 | 10 | 25 | 57 | ♊7 | 54 | 50 | ♊7 | 52 | 25 | −2 | 25 |
| | 23 | 22 | 26 | 45 | 2 | 26 | 55 | 11 | 8 | 1 | ♊21 | 9 | 6 | ♊21 | 6 | 54 | −2 | 12 |
| *Junii.* | 30 | 3 | 46 | 38 | 3 | 2 | 12 | 1 | 26 | 11 | ♍15 | 57 | 12 | ♍16 | 0 | 9 | +2 | 57 |
| *Julii.* | 2 | 5 | 22 | 27 | 3 | 3 | 57 | 2 | 23 | 55 | ♎15 | 11 | 35 | ♎15 | 14 | 41 | +3 | 6 |
| | 3 | 6 | 12 | 36 | 3 | 4 | 49 | 3 | 7 | 51 | ♎29 | 52 | 38 | ♎29 | 54 | 34 | +1 | 56 |
| | 5 | 8 | 2 | 31 | 3 | 6 | 35 | 4 | 5 | 29 | ♏29 | 13 | 5 | ♏29 | 13 | 57 | +0 | 52 |
| | 6 | 9 | 2 | 15 | 3 | 7 | 28 | 4 | 19 | 2 | ♐13 | 47 | 42 | ♐13 | 48 | 13 | +0 | 31 |
| | 8 | 11 | 2 | 34 | 3 | 9 | 14 | 5 | 15 | 15 | ♑12 | 21 | 31 | ♑12 | 22 | 16 | +0 | 45 |
| | 12 | 14 | 22 | 55 | 3 | 12 | 45 | 7 | 3 | 58 | ♓5 | 44 | 34 | ♓5 | 41 | 38 | −2 | 56 |
| | 13 | 15 | 3 | 52 | 3 | 13 | 37 | 7 | 15 | 31 | ♓18 | 18 | 8 | ♓18 | 14 | 23 | −3 | 45 |
| | 14 | 15 | 43 | 31 | 3 | 14 | 30 | 7 | 26 | 58 | ♈0 | 39 | 10 | ♈0 | 34 | 40 | −4 | 30 |
| | 18 | 18 | 31 | 40 | 3 | 18 | 0 | 9 | 12 | 47 | ♉19 | 40 | 20 | ♉19 | 36 | 39 | −3 | 41 |
| | 19 | 19 | 21 | 1 | 3 | 18 | 53 | 9 | 24 | 33 | ♊2 | 18 | 42 | ♊2 | 15 | 6 | −3 | 36 |
| | 21 | 21 | 10 | 15 | 3 | 20 | 39 | 10 | 18 | 54 | ♊28 | 36 | 0 | ♊28 | 33 | 3 | −2 | 57 |
| | 22 | 22 | 7 | 47 | 3 | 21 | 32 | 11 | 1 | 32 | ♋12 | 19 | 35 | ♋12 | 17 | 11 | −2 | 24 |
| | 28 | 2 | 29 | 49 | 3 | 25 | 57 | 1 | 8 | 57 | ♍25 | 25 | 0 | ♍25 | 29 | 39 | +4 | 39 |
| *Julii.* | 31 | 5 | 2 | 0 | 3 | 28 | 36 | 2 | 21 | 5 | ♎10 | 10 | 15 | ♎10 | 14 | 0 | +3 | 45 |
| *Aug.* | 1 | 5 | 57 | 44 | 3 | 29 | 29 | 3 | 4 | 57 | ♎24 | 50 | 30 | ♎24 | 52 | 52 | +2 | 22 |
| | 2 | 6 | 56 | 10 | 4 | 0 | 22 | 3 | 18 | 36 | ♏9 | 18 | 58 | ♏9 | 20 | 32 | +1 | 34 |
| | 4 | 8 | 54 | 57 | 4 | 2 | 9 | 4 | 14 | 58 | ♐7 | 32 | 3 | ♐7 | 34 | 14 | +2 | 11 |
| | 5 | 9 | 51 | 16 | 4 | 3 | 2 | 4 | 27 | 36 | ♐21 | 14 | 15 | ♐21 | 16 | 49 | +2 | 34 |
| | 6 | 10 | 43 | 39 | 4 | 3 | 56 | 5 | 9 | 54 | ♒4 | 40 | 21 | ♒4 | 41 | 56 | +1 | 35 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVIII. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Aug.* | 11 | 14 | 19 | 38 | 4 | 8 | 20 | 7 | 7 | 34 | ♈ 8 | 4 | 56 | ♈ 8 | 1 | 20 | −3 | 36 |
| | 12 | 14 | 59 | 38 | 4 | 9 | 13 | 7 | 18 | 46 | ♈20 | 16 | 42 | ♈20 | 13 | 11 | −3 | 31 |
| | 18 | 19 | 53 | 0 | 4 | 14 | 33 | 9 | 29 | 11 | ♋ 5 | 53 | 38 | ♋ 5 | 49 | 53 | −3 | 45 |
| :: | 26 | 2 | 1 | 19 | 4 | 20 | 48 | 1 | 4 | 58 | ♎19 | 25 | 10 | ♎19 | 27 | 22 | +2 | 12 |
| *Aug.* | 29 | 4 | 49 | 58 | 4 | 23 | 30 | 2 | 17 | 28 | ♐ 4 | 44 | 42 | ♐ 4 | 48 | 57 | +4 | 15 |
| *Cent.* | 6 | 11 | 37 | 20 | 5 | 0 | 40 | 5 | 26 | 19 | ♓21 | 20 | 47 | ♓21 | 21 | 29 | +0 | 42 |
| *Sept.* | 7 | 12 | 17 | 50 | 5 | 1 | 34 | 6 | 7 | 25 | ♈ 3 | 39 | 31 | ♈ 3 | 39 | 21 | −0 | 10 |
| | 8 | 12 | 57 | 32 | 5 | 2 | 28 | 6 | 18 | 26 | ♈15 | 52 | 53 | ♈15 | 51 | 53 | −1 | 0 |
| | 11 | 15 | 7 | 12 | 5 | 5 | 9 | 7 | 21 | 44 | ♉22 | 31 | 32 | ♉22 | 29 | 32 | −2 | 0 |
| | 12 | 15 | 56 | 0 | 5 | 6 | 3 | 8 | 3 | 10 | ♊ 4 | 54 | 13 | ♊ 4 | 53 | 5 | −1 | 8 |
| :: | 13 | 16 | 47 | 45 | 5 | 6 | 57 | 8 | 14 | 51 | ♊17 | 28 | 7 | ♊17 | 27 | 36 | −0 | 31 |
| :: | 14 | 17 | 41 | 45 | 5 | 7 | 51 | 8 | 26 | 51 | ♋ 0 | 19 | 4 | ♋ 0 | 17 | 51 | −1 | 13 |
| | 15 | 18 | 36 | 38 | 5 | 8 | 46 | 9 | 9 | 13 | ♋13 | 29 | 41 | ♋13 | 27 | 32 | −2 | 9 |
| | 16 | 19 | 31 | 8 | 5 | 9 | 40 | 9 | 21 | 59 | ♋27 | 3 | 6 | ♋27 | 0 | 35 | −2 | 31 |
| | 19 | 22 | 6 | 50 | 5 | 12 | 23 | 11 | 2 | 35 | ♍10 | 30 | 20 | ♍10 | 27 | 8 | −3 | 12 |
| | 25 | 2 | 37 | 39 | 5 | 16 | 56 | 1 | 14 | 36 | ♍28 | 38 | 58 | ♍28 | 41 | 38 | +2 | 40 |
| | 28 | 5 | 41 | 17 | 5 | 19 | 41 | 2 | 25 | 51 | ♎12 | 37 | 21 | ♎12 | 39 | 8 | +1 | 47 |
| *Sept.* | 29 | 6 | 36 | 25 | 5 | 20 | 35 | 3 | 8 | 44 | ♎26 | 17 | 6 | ♎26 | 17 | 55 | +0 | 49 |
| *Oct.* | ::1 | 8 | 11 | 30 | 5 | 22 | 24 | 4 | 3 | 11 | ♒22 | 19 | 56 | ♒22 | 21 | 39 | +1 | 43 |
| *Cent.* | ::5 | 10 | 55 | 42 | 5 | 26 | 2 | 5 | 18 | 24 | ♈11 | 48 | 11 | ♈11 | 49 | 35 | +1 | 24 |
| | 6 | 11 | 36 | 7 | 5 | 26 | 56 | 5 | 29 | 20 | ♈23 | 58 | 53 | ♈23 | 59 | 55 | +1 | 2 |
| | ::8 | 13 | 3 | 21 | 5 | 28 | 45 | 6 | 21 | 14 | ♉18 | 27 | 31 | ♉18 | 26 | 28 | −1 | 3 |
| | 9 | 13 | 52 | 16 | 5 | 29 | 40 | 7 | 2 | 22 | ♊ 0 | 48 | 36 | ♊ 0 | 47 | 13 | −1 | 23 |
| | 10 | 14 | 42 | 51 | 6 | 0 | 35 | 7 | 13 | 42 | ♊13 | 15 | 40 | ♊13 | 15 | 10 | −0 | 30 |
| | 11 | 15 | 35 | 35 | 6 | 1 | 30 | 7 | 25 | 17 | ♊25 | 52 | 58 | ♊25 | 52 | 59 | +0 | 1 |
| *Cent.* | ::14 | 18 | 13 | 17 | 6 | 4 | 15 | 9 | 2 | 5 | ♌ 5 | 11 | 23 | ♌ 5 | 11 | 9 | −0 | 14 |
| *Octo.* | 31 | 8 | 14 | 50 | 6 | 18 | 59 | 4 | 6 | 34 | ♓25 | 36 | 25 | ♓25 | 35 | 46 | −0 | 39 |
| *Nov.* | 1 | 8 | 54 | 2 | 6 | 19 | 56 | 4 | 17 | 45 | ♈ 7 | 47 | 4 | ♈ 7 | 47 | 44 | +0 | 40 |
| :: | 5 | 11 | 46 | 44 | 6 | 23 | 37 | 6 | 1 | 49 | ♉26 | 45 | 20 | ♉26 | 45 | 18 | −0 | 2 |
| | 6 | 12 | 39 | 9 | 6 | 24 | 33 | 6 | 13 | 0 | ♊ 9 | 16 | 44 | ♊ 9 | 16 | 0 | −0 | 44 |
| *Sect.* | 7 | 13 | 29 | 22 | 6 | 25 | 28 | 6 | 24 | 21 | ♊21 | 54 | 12 | ♊21 | 53 | 11 | −1 | 1 |
| | 8 | 14 | 25 | 10 | 6 | 26 | 24 | 7 | 5 | 58 | ♋ 4 | 42 | 42 | ♋ 4 | 42 | 10 | −0 | 32 |
| *Cent.* | :: 9 | 15 | 17 | 9 | 6 | 27 | 20 | 7 | 17 | 50 | ♋17 | 38 | 44 | ♋17 | 39 | 32 | +0 | 48 |
| | 11 | 16 | 59 | 53 | 6 | 29 | 11 | 8 | 12 | 37 | ♌14 | 12 | 7 | ♌14 | 12 | 13 | +0 | 6 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

## Anno JULIANO MDCCXXVIII. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Nov.* | 12 | 17 | 47 | 57 | 7 | 0. | 7 | 8 | 25 | 33 | ♌27 | 53 | 28 | ♌27 | 53 | 57 | +0 | 29 |
| | 13 | 18 | 35 | 5 | 7 | 1 | 3 | 9 | 8 | 52 | ♍11 | 56 | 13 | ♍11 | 55 | 13 | −1 | 0 |
| | 16 | 21 | 3 | 21 | 7 | 3. | 49 | 10 | 20 | 43 | ♎26 | 31 | 18 | ♎26 | 27 | 12 | −4 | 6 |
| :: | 23 | 3 | 8 | 42 | 7 | 9 | 27 | 1 | 14 | 54 | ♑28 | 25 | 37 | ♑28 | 23 | 52 | −1 | 45 |
| | 26 | 5 | 31 | 29 | 7 | 12 | 14 | 2 | 22 | 26 | ♓ 8 | 32 | 46 | ♓ 8 | 29 | 33 | −3 | 13 |
| | 28 | 6 | 51 | 57 | 7 | 14 | 5 | 3 | 15 | 46 | ♈ 3 | 25 | 0 | ♈ 3 | 22 | 34 | −2 | 26 |
| | 29 | 7 | 31 | 38 | 7 | 15 | 1 | 3 | 27 | 7 | ♈15 | 35 | 47 | ♈15 | 34 | 56 | −0 | 51 |
| *Nov.* | 30 | 8 | 12 | 36 | 7 | 15 | 56 | 4 | 8 | 19 | ♈27 | 45 | 35 | ♈27 | 45 | 31 | −0 | 4 |
| *Dec.* | 1 | 8 | 55 | 47 | 7 | 16 | 52 | 4 | 19 | 29 | ♉ 9 | 59 | 2 | ♉ 9 | 59 | 1 | −0 | 1 |
| | 3 | 10 | 31 | 14 | 7 | 18 | 44 | 5 | 11 | 52 | ♊ 4 | 49 | 39 | ♊ 4 | 48 | 53 | −0 | 46 |
| *Cent.* | 5 | 12 | 18 | 31 | 7 | 20 | 36 | 6 | 4 | 47 | ♋ 0 | 23 | 59 | ♋ 0 | 22 | 42 | −1 | 17 |
| | 7 | 14 | 6 | 46 | 7 | 22 | 28 | 6 | 28 | 34 | ♋26 | 43 | 29 | ♋26 | 42 | 1 | −1 | 28 |
| | 8 | 14 | 57 | 27 | 7 | 23 | 24 | 7 | 10 | 53 | ♌10 | 8 | 6 | ♌10 | 7 | 26 | −0 | 40 |
| | 10 | 16 | 32 | 41 | 7 | 25 | 16 | 8 | 6 | 28 | ♍ 7 | 32 | 8 | ♍ 7 | 32 | 25 | +0 | 17 |
| | 11 | 17 | 18 | 50 | 7 | 26 | 12 | 8 | 19 | 44 | ♍21 | 35 | 17 | ♍21 | 34 | 49 | −0 | 28 |
| | 12 | 18 | 5 | 43 | 7 | 27 | 8 | 9 | 3 | 17 | ♎ 5 | 55 | 15 | ♎ 5 | 53 | 3 | −2 | 12 |
| | 13 | 18 | 54 | 37 | 7 | 28 | 4 | 9 | 17 | 6 | ♎20 | 32 | 22 | ♎20 | 28 | 47 | −3 | 35 |
| | 15 | 20 | 43 | 47 | 7 | 29 | 56 | 10 | 15 | 12 | ♏20 | 34 | 55 | ♏20 | 30 | 42 | −4 | 13 |
| *Dec.* | 30 | 8 | 23 | 19 | 8 | 13 | 1 | 4 | 9 | 40 | ♉29 | 48 | 50 | ♉29 | 47 | 21 | −1 | 29 |

## Anno JULIANO MDCCXXIX. Currente.

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Jan.* | 1 | 10 | 7 | 52 | 8 | 14 | 53 | 5 | 2 | 47 | ♊25 | 12 | 36 | ♊25 | 12 | 9 | −0 | 27 |
| *Cent.* | 3 | 12 | 1 | 40 | 8 | 16 | 45 | 5 | 26 | 42 | ♋21 | 41 | 18 | ♋21 | 40 | 24 | −0 | 54 |
| | 7 | 15 | 17 | 14 | 8 | 20 | 29 | 7 | 17 | 34 | ♍17 | 17 | 12 | ♍17 | 15 | 8 | −2 | 4 |
| | 12 | 19 | 34 | 24 | 8 | 25 | 8 | 9 | 26 | 12 | ♐ 0 | 15 | 42 | ♐ 0 | 9 | 36 | −6 | 6 |
| | 25 | 5 | 28 | 15 | 9 | 6 | 17 | 2 | 25 | 13 | ♉12 | 16 | 20 | ♉12 | 16 | 20 | +0 | 0 |
| | 26 | 6 | 14 | 41 | 9 | 7 | 13 | 3 | 6 | 38 | ♉24 | 32 | 54 | ♉24 | 33 | 7 | +0 | 13 |
| | 27 | 7 | 4 | 14 | 9 | 8 | 8 | 3 | 18 | 10 | ♊ 6 | 56 | 5 | ♊ 6 | 57 | 15 | +1 | 10 |
| *Cent.*:: | 28 | 7 | 57 | 23 | 9 | 9 | 4 | 3 | 29 | 51 | ♊19 | 33 | 7 | ♊19 | 33 | 37 | +0 | 30 |
| *Jan.* | 30 | 9 | 44 | 32 | 9 | 10 | 55 | 4 | 23 | 49 | ♋15 | 34 | 34 | ♋15 | 35 | 35 | +1 | 1 |
| *Cent.* | 1 | 11 | 31 | 12 | 9 | 12 | 46 | 5 | 18 | 50 | ♌12 | 58 | 22 | ♌12 | 59 | 4 | +0 | 42 |
| *Feb.* | 2 | 12 | 22 | 30 | 9 | 13 | 42 | 6 | 1 | 47 | ♌27 | 10 | 19 | ♌27 | 10 | 52 | +0 | 33 |
| | 4 | 13 | 59 | 8 | 9 | 15 | 33 | 6 | 28 | 28 | ♍26 | 20 | 37 | ♍26 | 20 | 20 | −0 | 17 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIX. Currente.

| Transitus Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Feb.* | 5 | 14 | 48 | 0 | 9 | 16 | 28 | 7 | 12 | 11 | ♑11 | 11 | 22 | ♑11 | 10 | 13 | —1 | 9 |
| | 6 | 15 | 38 | 43 | 9 | 17 | 24 | 7 | 26 | 3 | ♑26 | 5 | 43 | ♑26 | 3 | 45 | —1 | 58 |
| | 9 | 18 | 29 | 14 | 9 | 20 | 10 | 9 | 7 | 51 | ♐10 | 33 | 0 | ♐10 | 26 | 52 | —6 | 8 |
| | 10 | 19 | 30 | 24 | 9 | 21 | 6 | 9 | 21 | 33 | ♐25 | 4 | 41 | ♐24 | 58 | 45 | —5 | 56 |
| | 11 | 20 | 30 | 40 | 9 | 22 | 2 | 10 | 4 | 58 | ♒ 9 | 24 | 52 | ♒ 9 | 18 | 31 | —6 | 21 |
| | 12 | 21 | 27 | 46 | 9 | 22 | 57 | 10 | 18 | 4 | ♒23 | 29 | 10 | ♒23 | 24 | 1 | —5 | 9 |
| | 25 | 6 | 38 | 18 | 10 | 3 | 56 | 3 | 8 | 34 | ♊26 | 41 | 33 | ♊26 | 43 | 42 | +2 | 9 |
| | 26 | 7 | 31 | 37 | 10 | 4 | 51 | 3 | 20 | 33 | ♋ 9 | 29 | 28 | ♋ 9 | 31 | 56 | +2 | 28 |
| | 27 | 8 | 24 | 43 | 10 | 5 | 46 | 4 | 2 | 49 | ♋22 | 37 | 0 | ♋22 | 39 | 44 | +2 | 44 |
| *Feb.* | 28 | 9 | 16 | 46 | 10 | 6 | 41 | 4 | 15 | 23 | ♌ 6 | 8 | 22 | ♌ 6 | 10 | 46 | +2 | 24 |
| *Mart.* | 2 | 10 | 56 | 54 | 10 | 8 | 30 | 5 | 11 | 32 | ♍ 4 | 29 | 55 | ♍ 4 | 33 | 19 | +3 | 24 |
| | 5 | 13 | 29 | 17 | 10 | 11 | 15 | 6 | 23 | 2 | ♑19 | 48 | 17 | ♑19 | 48 | 48 | +0 | 31 |
| | 23 | 3 | 39 | 5 | 10 | 26 | 39 | 1 | 25 | 0 | ♊ 9 | 27 | 45 | ♊ 9 | 26 | 40 | —1 | 5 |
| | 25 | 5 | 22 | 20 | 10 | 28 | 27 | 2 | 18 | 6 | ♋ 4 | 17 | 33 | ♋ 4 | 18 | 56 | +1 | 23 |
| *Mart.* | 30 | 9 | 32 | 23 | 11 | 2 | 57 | 4 | 21 | 20 | ♍11 | 38 | 0 | ♍11 | 38 | 57 | +0 | 57 |
| *Apri.* | 2 | 12 | 5 | 41 | 11 | 5 | 39 | 6 | 3 | 33 | ♑27 | 30 | 42 | ♑27 | 31 | 13 | +0 | 31 |
| | 4 | 14 | 7 | 35 | 11 | 7 | 27 | 7 | 2 | 37 | ♍29 | 10 | 22 | ♍29 | 10 | 58 | +0 | 36 |
| | 5 | 15 | 11 | 49 | 11 | 8 | 22 | 7 | 17 | 3 | ♐14 | 44 | 7 | ♐14 | 44 | 8 | —0 | 1 |
| | 19 | 1 | 34 | 53 | 11 | 19 | 57 | 0 | 24 | 41 | ♊ 5 | 19 | 9 | ♊ 5 | 16 | 2 | —3 | 7 |
| | 22 | 4 | 8 | 29 | 11 | 22 | 37 | 1 | 28 | 47 | ♋12 | 29 | 46 | ♋12 | 29 | 4 | —0 | 42 |
| | 23 | 4 | 58 | 57 | 11 | 23 | 31 | 2 | 10 | 38 | ♑25 | 9 | 53 | ♑25 | 10 | 43 | +0 | 50 |
| | 28 | 8 | 57 | 28 | 11 | 27 | 56 | 4 | 15 | 34 | ♑ 3 | 59 | 26 | ♑ 3 | 59 | 21 | —0 | 5 |
| *Apri.* | 29 | 9 | 48 | 40 | 11 | 28 | 50 | 4 | 29 | 44 | ♑19 | 15 | 5 | ♑19 | 14 | 2 | —1 | 3 |
| *Maii.* | 2 | 12 | 51 | 8 | 0 | 1 | 30 | 6 | 13 | 31 | ♐ 6 | 54 | 54 | ♐ 6 | 56 | 6 | +1 | 12 |
| | 7 | 17 | 47 | 34 | 0 | 5 | 57 | 8 | 22 | 50 | ♒21 | 8 | 45 | ♒21 | 3 | 25 | —5 | 20 |
| | 9 | 19 | 15 | 8 | 0 | 7 | 43 | 9 | 17 | 34 | ♓17 | 19 | 43 | ♓17 | 13 | 45 | —5 | 58 |
| | 18 | 1 | 13 | 9 | 0 | 14 | 44 | 0 | 17 | 37 | ♊26 | 3 | 35 | ♊26 | 1 | 53 | —1 | 42 |
| | 19 | 2 | 4 | 52 | 0 | 15 | 37 | 0 | 28 | 57 | ♋ 8 | 32 | 48 | ♋ 8 | 31 | 6 | —1 | 42 |
| | 20 | 2 | 55 | 34 | 0 | 16 | 30 | 1 | 10 | 31 | ♋21 | 8 | 5 | ♋21 | 7 | 49 | —0 | 16 |
| | 24 | 6 | 6 | 48 | 0 | 20 | 1 | 2 | 29 | 58 | ♍13 | 47 | 55 | ♍13 | 48 | 23 | +0 | 28 |
| | 26 | 7 | 37 | 3 | 0 | 21 | 46 | 3 | 26 | 58 | ♑12 | 20 | 27 | ♑12 | 18 | 51 | —1 | 36 |
| *Maii.* | 29 | 10 | 26 | 23 | 0 | 24 | 25 | 5 | 9 | 58 | ♍28 | 35 | 13 | ♍28 | 31 | 39 | —3 | 34 |
| *Cent.* | 30 | 11 | 33 | 16 | 0 | 25 | 18 | 5 | 24 | 35 | ♐14 | 29 | 17 | ♐14 | 26 | 42 | —2 | 35 |
| *Cent.* | 31 | 12 | 40 | 5 | 0 | 26 | 11 | 6 | 9 | 5 | ♑ 0 | 16 | 43 | ♑ 0 | 14 | 49 | —1 | 54 |

# *LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

Anno JULIANO MDCCXXIX. Currente.

| *Transitûs Limbi Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Distantia ☾ à ☉* | | | *Longitudo Centri Lunæ Observata.* | | | *Longitudo Centri Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Junii.* | 2 | 14 | 44 | 55 | 0 | 27 | 57 | 7 | 7 | 15 | ♒ 0 | 45 | 3 | ♒ 0 | 42 | 39 | —2 | 24 |
| | 3 | 15 | 38 | 10 | 0 | 28 | 50 | 7 | 20 | 44 | ♒15 | 10 | 47 | ♒15 | 7 | 45 | —3 | 2 |
| | 4 | 16 | 26 | 38 | 0 | 29 | 43 | 8 | 3 | 46 | ♒29 | 3 | 16 | ♒28 | 59 | 56 | —3 | 20 |
| | 5 | 17 | 11 | 12 | 1 | 0 | 35 | 8 | 16 | 23 | ♓12 | 26 | 43 | ♓12 | 22 | 23 | —4 | 20 |
| | 6 | 17 | 53 | 18 | 1 | 1 | 27 | 8 | 28 | 37 | ♓25 | 24 | 25 | ♓25 | 20 | 6 | —4 | 19 |
| | 7 | 18 | 34 | 26 | 1 | 2 | 20 | 9 | 10 | 31 | ♈ 8 | 3 | 32 | ♈ 7 | 59 | 31 | —4 | 1 |
| | 10 | 20 | 42 | 49 | 1 | 4 | 57 | 10 | 14 | 49 | ♉15 | 0 | 20 | ♉14 | 59 | 2 | —1 | 18 |
| | 11 | 21 | 29 | 55 | 1 | 5 | 49 | 10 | 26 | 0 | ♉27 | 15 | 17 | ♉27 | 14 | 30 | —0 | 47 |
| | 17 | 1 | 42 | 12 | 1 | 10 | 12 | 0 | 22 | 49 | ♌29 | 55 | 31 | ♌29 | 55 | 29 | —0 | 2 |
| | 18 | 2 | 30 | 14 | 1 | 11 | 5 | 1 | 4 | 44 | ♌12 | 54 | 22 | ♌12 | 54 | 30 | +0 | 8 |
| | 22 | 5 | 32 | 19 | 1 | 14 | 35 | 2 | 25 | 44 | ♎ 7 | 15 | 50 | ♎ 7 | 15 | 33 | —0 | 17 |
| | 24 | 7 | 13 | 16 | 1 | 16 | 20 | 3 | 23 | 19 | ♏ 6 | 27 | 15 | ♏ 6 | 25 | 2 | —2 | 13 |
| | 25 | 8 | 10 | 34 | 1 | 17 | 13 | 4 | 7 | 31 | ♏21 | 35 | 24 | ♏21 | 32 | 0 | —3 | 24 |
| | 26 | 9 | 12 | 36 | 1 | 18 | 6 | 4 | 21 | 51 | ♐ 6 | 58 | 42 | ♐ 6 | 55 | 26 | —3 | 16 |
| | 28 | 11 | 23 | 0 | 1 | 19 | 52 | 5 | 20 | 28 | ♑ 7 | 58 | 53 | ♑ 7 | 55 | 27 | —3 | 26 |
| | 29 | 12 | 27 | 28 | 1 | 20 | 45 | 6 | 4 | 30 | ♑23 | 14 | 0 | ♑23 | 11 | 20 | —2 | 40 |
| *Junii.* | 30 | 13 | 24 | 17 | 1 | 21 | 38 | 6 | 18 | 11 | ♒ 8 | 4 | 57 | ♒ 8 | 2 | 45 | —2 | 12 |
| *Julii.* | 1 | 14 | 15 | 52 | 1 | 22 | 31 | 7 | 1 | 29 | ♒22 | 28 | 50 | ♒22 | 26 | 35 | —2 | 15 |
| | 2 | 15 | 3 | 8 | 1 | 23 | 23 | 7 | 14 | 24 | ♓ 6 | 24 | 22 | ♓ 6 | 21 | 26 | —2 | 56 |
| | 11 | 21 | 56 | 15 | 2 | 1 | 16 | 10 | 29 | 54 | ♊29 | 52 | 40 | ♊29 | 52 | 46 | +0 | 6 |
| | 21 | 5 | 8 | 42 | 2 | 9 | 11 | 2 | 22 | 25 | ♏ 1 | 44 | 26 | ♏ 1 | 45 | 7 | +0 | 41 |
| | 22 | 6 | 3 | 0 | 2 | 10 | 4 | 3 | 6 | 19 | ♏16 | 25 | 28 | ♏16 | 25 | 48 | +0 | 20 |
| | 23 | 7 | 1 | 46 | 2 | 10 | 57 | 3 | 20 | 22 | ♐ 1 | 19 | 11 | ♐ 1 | 17 | 57 | —1 | 14 |
| | 26 | 10 | 9 | 36 | 2 | 13 | 37 | 5 | 2 | 27 | ♑16 | 21 | 44 | ♑16 | 19 | 24 | —2 | 20 |
| | 27 | 11 | 7 | 56 | 2 | 14 | 30 | 5 | 16 | 5 | ♒ 1 | 9 | 20 | ♒ 1 | 6 | 40 | —2 | 40 |
| *Julii.* | 28 | 12 | 1 | 37 | 2 | 15 | 23 | 5 | 29 | 25 | ♒15 | 40 | 6 | ♒15 | 37 | 10 | —2 | 56 |
| *Aug.* | 2 | 15 | 48 | 7 | 2 | 19 | 47 | 8 | 1 | 17 | ♈22 | 52 | 49 | ♈22 | 51 | 41 | —1 | 8 |
| | 3 | 16 | 32 | 5 | 2 | 20 | 40 | 8 | 12 | 57 | ♉ 5 | 25 | 29 | ♉ 5 | 23 | 47 | —1 | 42 |
| | 6 | 18 | 55 | 42 | 2 | 23 | 19 | 9 | 17 | 27 | ♊12 | 23 | 40 | ♊12 | 23 | 17 | —0 | 23 |
| | 10 | 22 | 21 | 6 | 2 | 26 | 52 | 11 | 4 | 20 | ♌ 3 | 6 | 3 | ♌ 3 | 5 | 49 | —0 | 14 |
| | 17 | 3 | 5 | 32 | 3 | 2 | 11 | 1 | 21 | 41 | ♎27 | 16 | 24 | ♎27 | 19 | 28 | +3 | 4 |
| | 18 | 3 | 59 | 6 | 3 | 3 | 5 | 2 | 5 | 30 | ♏12 | 1 | 38 | ♏12 | 3 | 49 | +2 | 11 |
| | 19 | 4 | 56 | 24 | 3 | 3 | 59 | 2 | 19 | 28 | ♏26 | 49 | 54 | ♏26 | 52 | 01 | +2 | 7 |
| | 21 | 6 | 59 | 9 | 3 | 5 | 46 | 3 | 17 | 27 | ♐26 | 24 | 58 | ♐26 | 25 | 19 | +0 | 21 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIX. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o. | ′ | S. | o. | ′ | o. | ′ | ″ | o. | ′ | ″ | ′ | ″ |
| *Aug.* | 22 | 8 | 0 | 24 | 3 | 6 | 40 | 4 | 1 | 16 | ♍11 | 4 | 10 | ♍11 | 3 | 46 | −0 | 24 |
| | 24 | 9 | 52 | 44 | 3 | 8 | 28 | 4 | 28 | 7 | ♒ 9 | 50 | 27 | ♒ 9 | 49 | 22 | −1 | 5 |
| | 25 | 10 | 42 | 42 | 3 | 9 | 21 | 5 | 11 | 3 | ♒23 | 52 | 41 | ♒23 | 52 | 5 | −0 | 36 |
| | 26 | 11 | 29 | 18 | 3 | 10 | 15 | 5 | 23 | 39 | ♓ 7 | 40 | 1 | ♓ 7 | 39 | 8 | −0 | 53 |
| | 27 | 12 | 15 | 48 | 3 | 11 | 8 | 6 | 5 | 58 | ♓21 | 12 | 25 | ♓21 | 11 | 20 | −1 | 5 |
| | 29 | 13 | 41 | 52 | 3 | 12 | 55 | 6 | 29 | 47 | ♈17 | 25 | 8 | ♈17 | 23 | 58 | −1 | 10 |
| | 30 | 14 | 25 | 36 | 3 | 13 | 49 | 7 | 11 | 23 | ♉ 0 | 8 | 23 | ♉ 0 | 7 | 56 | −0 | 27 |
| *Aug.* | 31 | 15 | 10 | 55 | 3 | 14 | 42 | 7 | 22 | 53 | ♉12 | 40 | 45 | ♉12 | 39 | 44 | −1 | 1 |
| *Sept.* | 1 | 15 | 58 | 10 | 3 | 15 | 36 | 8 | 4 | 19 | ♉25 | 3 | 45 | ♉25 | 2 | 37 | −1 | 8 |
| | 2 | 16 | 47 | 21 | 3 | 16 | 29 | 8 | 15 | 44 | ♊ 7 | 21 | 40 | ♊ 7 | 20 | 28 | −1 | 12 |
| | 4 | 18 | 29 | 30 | 3 | 18 | 17 | 9 | 8 | 46 | ♋ 1 | 59 | 58 | ♋ 1 | 59 | 24 | −0 | 34 |
| | 7 | 20 | 59 | 50 | 3 | 20 | 59 | 10 | 14 | 35 | ♌10 | 20 | 8 | ♌10 | 19 | 21 | −0 | 47 |
| | 8 | 21 | 47 | 30 | 3 | 21 | 53 | 10 | 27 | 1 | ♌23 | 47 | 22 | ♌23 | 46 | 10 | −1 | 12 |
| | 20 | 7 | 48 | 22 | 4 | 1 | 50 | 3 | 27 | 11 | ♒ 5 | 17 | 57 | ♒ 5 | 17 | 22 | −0 | 35 |
| | 21 | 8 | 38 | 35 | 4 | 2 | 44 | 4 | 10 | 11 | ♒19 | 9 | 0 | ♒19 | 9 | 23 | +0 | 23 |
| | 22 | 9 | 25 | 19 | 4 | 3 | 39 | 4 | 22 | 50 | ♓ 2 | 45 | 53 | ♓ 2 | 46 | 28 | +0 | 35 |
| | 23 | 10 | 9 | 33 | 4 | 4 | 33 | 5 | 5 | 7 | ♓16 | 8 | 40 | ♓16 | 9 | 57 | +1 | 17 |
| | 24 | 10 | 52 | 27 | 4 | 5 | 27 | 5 | 17 | 5 | ♓29 | 19 | 51 | ♓29 | 20 | 42 | +0 | 51 |
| | 26 | 12 | 20 | 25 | 4 | 7 | 16 | 6 | 10 | 19 | ♈25 | 5 | 45 | ♈25 | 7 | 20 | +1 | 35 |
| | 27 | 13 | 5 | 6 | 4 | 8 | 10 | 6 | 21 | 40 | ♉ 7 | 42 | 34 | ♉ 7 | 43 | 58 | +1 | 24 |
| | 28 | 13 | 51 | 44 | 4 | 9 | 4 | 7 | 2 | 55 | ♉20 | 11 | 15 | ♉20 | 11 | 36 | +0 | 21 |
| | 29 | 14 | 40 | 13 | 4 | 9 | 59 | 7 | 14 | 9 | ♊ 2 | 31 | 56 | ♊ 2 | 32 | 12 | +0 | 16 |
| *Sept.* | 30 | 15 | 30 | 18 | 4 | 10 | 53 | 7 | 25 | 24 | ♊14 | 47 | 49 | ♊14 | 48 | 27 | +0 | 38 |
| *Octo.* | 2 | 17 | 11 | 53 | 4 | 12 | 43 | 8 | 18 | 13 | ♋ 9 | 20 | 58 | ♋ 9 | 21 | 46 | +0 | 48 |
| | 3 | 18 | 1 | 35 | 4 | 13 | 38 | 8 | 29 | 53 | ♋21 | 46 | 31 | ♋21 | 47 | 45 | +1 | 14 |
| | 5 | 19 | 37 | 0 | 4 | 15 | 27 | 9 | 24 | 0 | ♌17 | 26 | 5 | ♌17 | 26 | 18 | +0 | 13 |
| | 6 | 20 | 23 | 20 | 4 | 16 | 21 | 10 | 6 | 33 | ♍ 0 | 51 | 58 | ♍ 0 | 50 | 24 | −1 | 34 |
| | 7 | 21 | 9 | 37 | 4 | 17 | 16 | 10 | 19 | 28 | ♍14 | 46 | 10 | ♍14 | 43 | 29 | −2 | 41 |
| :: | 8 | 21 | 57 | 4 | 4 | 18 | 11 | 11 | 2 | 45 | ♍29 | 12 | 35 | ♍29 | 8 | 2 | −4 | 33 |
| | 15 | 3 | 46 | 6 | 4 | 23 | 42 | 1 | 27 | 45 | ♎ 1 | 36 | 15 | ♎ 1 | 36 | 58 | +0 | 43 |
| *Cent.* | 18 | 6 | 37 | 28 | 4 | 26 | 28 | 3 | 8 | 52 | ♒15 | 2 | 10 | ♒15 | 0 | 33 | −1 | 37 |
| | 19 | 7 | 23 | 53 | 4 | 27 | 23 | 3 | 21 | 46 | ♒28 | 40 | 31 | ♒28 | 39 | 11 | −1 | 20 |
| | 20 | 8 | 9 | 20 | 4 | 28 | 18 | 4 | 4 | 16 | ♓11 | 59 | 39 | ♓12 | 0 | 31 | +0 | 52 |
| | 21 | 8 | 51 | 2 | 4 | 29 | 13 | 4 | 16 | 22 | ♓25 | 4 | 55 | ♓25 | 5 | 36 | +0 | 41 |

# *LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

## Anno JULIANO MDCCXXIX. Currente.

| *Transitus Limbi Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Distantia ☾ à ☉* | | | *Longitudo Centri Lunæ Observata.* | | | *Longitudo Centri Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | *S.* | o | ′ | *S.* | o | ′ | ☊ | ′ | ″ | ☊ | ′ | ″ | ′ | ″ |
| *Octo.* | 24 | 10 | 59 | 24 | 5 | 1 | 58 | 5 | 20 | 58 | ♉ 3 | 14 | 45 | ♉ 3 | 17 | 8 | +2 | 23 |
| | 28 | 14 | 15 | 20 | 5 | 5 | 39 | 7 | 5 | 17 | ♊22 | 38 | 46 | ♊22 | 39 | 46 | +1 | 0 |
| | 30 | 15 | 55 | 34 | 5 | 7 | 30 | 7 | 27 | 46 | ♋17 | 9 | 30 | ♋17 | 10 | 30 | +1 | 0 |
| *Octo.* | 31 | 16 | 43 | 36 | 5 | 8 | 25 | 8 | 9 | 18 | ♋29 | 32 | 18 | ♋29 | 33 | 44 | +1 | 26 |
| *Nov.* | 1 | 17 | 29 | 56 | 5 | 9 | 21 | 8 | 21 | 5 | ♌12 | 7 | 7 | ♌12 | 8 | 27 | +1 | 20 |
| | 2 | 18 | 15 | 6 | 5 | 10 | 16 | 9 | 3 | 13 | ♌25 | 0 | 12 | ♌25 | 0 | 16 | +0 | 4 |
| | 4 | 19 | 45 | 2 | 5 | 12 | 7 | 9 | 28 | 38 | ♍22 | 2 | 27 | ♍21 | 59 | 55 | −2 | 32 |
| | 5 | 20 | 32 | 14 | 5 | 13 | 2 | 10 | 11 | 58 | ♎ 6 | 21 | 15 | ♎ 6 | 17 | 13 | −4 | 2 |
| :: | 16 | 6 | 6 | 32 | 5 | 22 | 21 | 3 | 2 | 19 | ♓ 7 | 46 | 14 | ♓ 7 | 44 | 0 | −2 | 14 |
| | 17 | 6 | 50 | 8 | 5 | 23 | 17 | 3 | 14 | 49 | ♓21 | 2 | 58 | ♓21 | 0 | 46 | −2 | 12 |
| | 19 | 8 | 14 | 30 | 5 | 25 | 8 | 4 | 8 | 41 | ♈16 | 41 | 36 | ♈16 | 42 | 24 | +0 | 48 |
| | 20 | 8 | 57 | 36 | 5 | 26 | 4 | 4 | 20 | 9 | ♈29 | 13 | 49 | ♈29 | 15 | 27 | +1 | 38 |
| | 21 | 9 | 42 | 24 | 5 | 26 | 59 | 5 | 1 | 24 | ♉11 | 38 | 48 | ♉11 | 41 | 11 | +2 | 23 |
| | 22 | 10 | 29 | 21 | 5 | 27 | 55 | 5 | 12 | 28 | ♉23 | 59 | 37 | ♉24 | 1 | 36 | +1 | 59 |
| | 23 | 11 | 18 | 20 | 5 | 28 | 51 | 5 | 23 | 28 | ♊ 6 | 17 | 22 | ♊ 6 | 18 | 43 | +1 | 21 |
| | 25 | 13 | 1 | 47 | 6 | 0 | 43 | 6 | 15 | 25 | ♋ 0 | 49 | 38 | ♋ 0 | 50 | 7 | +0 | 29 |
| | 27 | 14 | 40 | 23 | 6 | 2 | 34 | 7 | 7 | 41 | ♋25 | 26 | 53 | ♋25 | 26 | 9 | −0 | 44 |
| | 28 | 15 | 26 | 55 | 6 | 3 | 30 | 7 | 19 | 7 | ♌ 7 | 52 | 56 | ♌ 7 | 52 | 24 | −0 | 32 |
| *Nov.* | 29 | 16 | 11 | 38 | 6 | 4 | 26 | 8 | 0 | 48 | ♌20 | 28 | 26 | ♌20 | 28 | 37 | +0 | 11 |
| *Dec.* | 1 | 17 | 38 | 48 | 6 | 6 | 17 | 8 | 25 | 12 | ♍16 | 30 | 22 | ♍16 | 29 | 42 | −0 | 40 |
| | 2 | 18 | 23 | 20 | 6 | 7 | 13 | 9 | 8 | 0 | ♎ 0 | 6 | 25 | ♎ 0 | 4 | 41 | −1 | 44 |
| | 4 | 20 | 1 | 12 | 6 | 9 | 5 | 10 | 4 | 55 | ♎28 | 51 | 21 | ♎28 | 45 | 59 | −5 | 22 |
| | 14 | 4 | 45 | 33 | 6 | 17 | 32 | 2 | 11 | 42 | ♓15 | 58 | 19 | ♓15 | 57 | 3 | −1 | 16 |
| | 15 | 5 | 29 | 24 | 6 | 18 | 27 | 2 | 24 | 17 | ♓29 | 23 | 4 | ♓29 | 20 | 55 | −2 | 9 |
| | 19 | 8 | 26 | 0 | 6 | 22 | 11 | 4 | 11 | 14 | ♉19 | 54 | 56 | ♉19 | 55 | 50 | +0 | 54 |
| | 21 | 10 | 4 | 10 | 6 | 24 | 2 | 5 | 3 | 29 | ♊14 | 26 | 5 | ♊14 | 27 | 20 | +1 | 15 |
| | 22 | 10 | 55 | 1 | 6 | 24 | 58 | 5 | 14 | 30 | ♊26 | 42 | 2 | ♊26 | 42 | 54 | +0 | 52 |
| | 28 | 15 | 37 | 23 | 7 | 0 | 34 | 7 | 23 | 3 | ♍12 | 17 | 50 | ♍12 | 16 | 2 | −1 | 48 |
| | 29 | 16 | 20 | 46 | 7 | 1 | 30 | 8 | 5 | 24 | ♍25 | 34 | 19 | ♍25 | 32 | 36 | −1 | 43 |
| *Dec.* | 30 | 17 | 5 | 37 | 7 | 2 | 26 | 8 | 18 | 9 | ♎ 9 | 10 | 49 | ♎ 9 | 8 | 25 | −2 | 24 |

## Anno JULIANO MDCCXXX. Currente.

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Jan.* | 1 | 18 | 44 | 56 | 7 | 4 | 17 | 9 | 14 | 51 | ♏ 7 | 34 | 42 | ♏ 7 | 29 | 56 | −4 | 46 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXX. Currente.

| Transitus Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | ° | ′ | S. | ° | ′ | ° | ′ | ″ | ☊ | ′ | ″ | ′ | ″ |
| *Jan.* | 13 | 4 | 50 | 10 | 7 | 14 | 35 | 2 | 15 | 13 | ♈ 20 | 1 | 35 | ♈ 20 | 1 | 29 | −0 | 6 |
| | 14 | 5 | 34 | 52 | 7 | 15 | 30 | 2 | 27 | 10 | ♉ 2 | 49 | 26 | ♉ 2 | 49 | 50 | +0 | 24 |
| | 15 | 6 | 20 | 57 | 7 | 16 | 26 | 3 | 8 | 52 | ♉ 15 | 21 | 47 | ♉ 15 | 22 | 21 | +0 | 34 |
| | 16 | 7 | 8 | 49 | 7 | 17 | 22 | 3 | 20 | 21 | ♉ 27 | 43 | 56 | ♉ 27 | 44 | 21 | +0 | 25 |
| | 18 | 8 | 48 | 53 | 7 | 19 | 13 | 4 | 12 | 56 | ♊ 22 | 13 | 55 | ♊ 22 | 15 | 2 | +1 | 7 |
| | 21 | 11 | 18 | 15 | 7 | 22 | 0 | 5 | 16 | 41 | ♋ 29 | 24 | 9 | ♋ 29 | 23 | 48 | −0 | 21 |
| | 25 | 14 | 19 | 55 | 7 | 25 | 42 | 7 | 3 | 48 | ♍ 21 | 26 | 30 | ♍ 21 | 22 | 59 | −3 | 31 |
| | 27 | 15 | 51 | 3 | 7 | 27 | 33 | 7 | 29 | 7 | ♎ 18 | 53 | 7 | ♎ 18 | 48 | 56 | −4 | 11 |
| | 28 | 16 | 40 | 46 | 7 | 28 | 29 | 8 | 12 | 18 | ♏ 3 | 0 | 0 | ♏ 2 | 55 | 18 | −4 | 42 |
| | 29 | 17 | 34 | 33 | 7 | 29 | 25 | 8 | 25 | 50 | ♏ 17 | 23 | 25 | ♏ 17 | 17 | 42 | −5 | 43 |
| *Jan.* | 30 | 18 | 32 | 39 | 8 | 0 | 21 | 9 | 9 | 40 | ♐ 2 | 1 | 45 | ♐ 1 | 55 | 39 | −6 | 6 |
| *Feb.* | 9 | 2 | 41 | 30 | 8 | 8 | 41 | 1 | 11 | 38 | ♈ 13 | 54 | 15 | ♈ 13 | 54 | 47 | +0 | 32 |
| | 10 | 3 | 26 | 57 | 8 | 9 | 36 | 1 | 23 | 49 | ♈ 27 | 8 | 43 | ♈ 27 | 9 | 54 | +1 | 11 |
| | 14 | 6 | 41 | 2 | 8 | 13 | 17 | 3 | 10 | 31 | ♊ 17 | 22 | 16 | ♊ 17 | 23 | 22 | +1 | 6 |
| | 15 | 7 | 31 | 44 | 8 | 14 | 12 | 3 | 21 | 56 | ♊ 29 | 36 | 15 | ♊ 29 | 38 | 6 | +1 | 51 |
| | 16 | 8 | 23 | 8 | 8 | 15 | 7 | 4 | 3 | 21 | ♋ 11 | 54 | 21 | ♋ 11 | 55 | 55 | +1 | 34 |
| | 17 | 9 | 11 | 1 | 8 | 16 | 2 | 4 | 14 | 48 | ♋ 24 | 18 | 50 | ♋ 24 | 19 | 56 | +1 | 6 |
| : : | 20 | 11 | 29 | 14 | 8 | 18 | 47 | 5 | 20 | 1 | ♍ 2 | 56 | 5 | ♍ 2 | 54 | 44 | −1 | 21 |
| | 21 | 12 | 15 | 54 | 8 | 19 | 42 | 6 | 2 | 13 | ♍ 16 | 24 | 42 | ♍ 16 | 22 | 25 | −2 | 17 |
| | 23 | 13 | 47 | 53 | 8 | 21 | 31 | 6 | 27 | 28 | ♎ 14 | 13 | 33 | ♎ 14 | 10 | 6 | −3 | 27 |
| *Feb.* | 24 | 14 | 37 | 32 | 8 | 22 | 26 | 7 | 10 | 35 | ♎ 28 | 32 | 16 | ♎ 28 | 27 | 25 | −4 | 51 |
| *Mart.* | 13 | 4 | 32 | 13 | 9 | 7 | 2 | 2 | 7 | 58 | ♊ 12 | 15 | 18 | ♊ 12 | 16 | 30 | +1 | 12 |
| | 15 | 6 | 13 | 22 | 9 | 8 | 51 | 3 | 0 | 54 | ♋ 6 | 46 | 30 | ♋ 6 | 48 | 30 | +2 | 0 |
| | 16 | 7 | 2 | 31 | 9 | 9 | 45 | 3 | 12 | 25 | ♋ 19 | 2 | 20 | ♋ 19 | 4 | 51 | +2 | 31 |
| | 17 | 7 | 50 | 9 | 9 | 10 | 40 | 3 | 24 | 02 | ♌ 1 | 26 | 55 | ♌ 1 | 28 | 48 | +1 | 53 |
| | 19 | 9 | 21 | 14 | 9 | 12 | 28 | 4 | 17 | 48 | ♌ 27 | 1 | 21 | ♌ 27 | 1 | 55 | +0 | 34 |
| | 20 | 10 | 5 | 46 | 9 | 13 | 22 | 5 | 0 | 1 | ♍ 10 | 19 | 29 | ♍ 10 | 19 | 48 | +0 | 19 |
| | 21 | 10 | 50 | 53 | 9 | 14 | 16 | 5 | 12 | 33 | ♍ 24 | 3 | 45 | ♍ 24 | 2 | 24 | −1 | 21 |
| | 22 | 11 | 38 | 45 | 9 | 15 | 10 | 5 | 25 | 24 | ♎ 8 | 11 | 55 | ♎ 8 | 10 | 16 | −1 | 39 |
| | 23 | 12 | 29 | 25 | 9 | 16 | 4 | 6 | 8 | 35 | ♎ 22 | 42 | 44 | ♎ 22 | 40 | 48 | −1 | 56 |
| | 30 | 19 | 19 | 50 | 9 | 22 | 25 | 9 | 15 | 40 | ♒ 6 | 35 | 38 | ♒ 6 | 28 | 2 | −7 | 36 |
| *Mart.* | 31 | 20 | 10 | 59 | 9 | 23 | 19 | 9 | 29 | 8 | ♒ 20 | 49 | 52 | ♒ 20 | 42 | 22 | −7 | 30 |
| *Apri.* | 1 | 20 | 58 | 50 | 9 | 24 | 12 | 10 | 12 | 16 | ♓ 4 | 50 | 46 | ♓ 4 | 44 | 53 | −5 | 53 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXX. Currente.

| Transitus Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | ○ | ′ | S. | ○ | ′ | ○ | ′ | ″ | ○ | ′ | ″ | ′ | ″ |
| *Apri.* | 13 | 5 | 42 | 45 | 10 | 4 | 2 | 2 | 21 | 57 | ♋ 26 | 18 | 53 | ♋ 26 | 20 | 21 | +1 | 28 |
| | 15 | 7 | 13 | 15 | 10 | 5 | 49 | 3 | 15 | 26 | ♌ 21 | 15 | 27 | ♌ 21 | 16 | 41 | +1 | 14 |
| | 16 | 7 | 57 | 5 | 10 | 6 | 42 | 3 | 27 | 33 | ♍ 4 | 10 | 26 | ♍ 4 | 11 | 12 | +0 | 46 |
| | 17 | 8 | 41 | 10 | 10 | 7 | 35 | 4 | 9 | 58 | ♍ 17 | 30 | 29 | ♍ 17 | 30 | 41 | +0 | 12 |
| | 18 | 9 | 26 | 37 | 10 | 8 | 28 | 4 | 22 | 45 | ♎ 1 | 19 | 32 | ♎ 1 | 18 | 39 | −0 | 53 |
| | 19 | 10 | 14 | 40 | 10 | 9 | 22 | 5 | 5 | 53 | ♎ 15 | 38 | 45 | ♎ 15 | 37 | 22 | −1 | 23 |
| | 20 | 11 | 6 | 32 | 10 | 10 | 15 | 5 | 19 | 24 | ♏ 0 | 26 | 40 | ♏ 0 | 24 | 53 | −1 | 47 |
| | 21 | 12 | 5 | 28 | 10 | 11 | 9 | 6 | 3 | 17 | ♏ 15 | 39 | 2 | ♏ 15 | 37 | 51 | −1 | 11 |
| | 25 | 16 | 17 | 40 | 10 | 14 | 44 | 8 | 0 | 24 | ♑ 17 | 14 | 18 | ♑ 17 | 11 | 17 | −3 | 1 |
| | 26 | 17 | 15 | 20 | 10 | 15 | 37 | 8 | 14 | 29 | ♒ 2 | 4 | 46 | ♒ 2 | 0 | 55 | −3 | 51 |
| | 27 | 18 | 8 | 14 | 10 | 16 | 31 | 8 | 28 | 14 | ♒ 16 | 33 | 0 | ♒ 16 | 28 | 22 | −4 | 38 |
| | 28 | 18 | 57 | 11 | 10 | 17 | 24 | 9 | 11 | 40 | ♓ 0 | 41 | 26 | ♓ 0 | 35 | 51 | −5 | 35 |
| *Apri.* | 29 | 19 | 43 | 12 | 10 | 18 | 17 | 9 | 24 | 42 | ♓ 14 | 29 | 52 | ♓ 14 | 24 | 59 | −4 | 53 |
| *Maii.* | 11 | 4 | 23 | 37 | 10 | 28 | 0 | 2 | 2 | 26 | ♌ 3 | 58 | 28 | ♌ 4 | 2 | 18 | +3 | 50 |
| | 13 | 5 | 51 | 3 | 10 | 29 | 45 | 2 | 25 | 42 | ♌ 28 | 50 | 17 | ♌ 28 | 50 | 3 | −0 | 14 |
| | 14 | 6 | 33 | 50 | 11 | 0 | 37 | 3 | 7 | 48 | ♍ 11 | 41 | 43 | ♍ 11 | 40 | 59 | −0 | 44 |
| | 15 | 7 | 17 | 23 | 11 | 1 | 30 | 3 | 20 | 16 | ♍ 24 | 57 | 46 | ♍ 24 | 56 | 15 | −1 | 31 |
| | 16 | 8 | 2 | 55 | 11 | 2 | 23 | 4 | 3 | 9 | ♎ 8 | 43 | 12 | ♎ 8 | 40 | 57 | −2 | 15 |
| | 17 | 8 | 51 | 52 | 11 | 3 | 16 | 4 | 16 | 26 | ♎ 23 | 1 | 18 | ♎ 22 | 58 | 24 | −2 | 54 |
| | 19 | 10 | 44 | 22 | 11 | 5 | 2 | 5 | 14 | 16 | ♏ 23 | 12 | 36 | ♏ 23 | 9 | 20 | −3 | 16 |
| | 21 | 12 | 54 | 30 | 11 | 6 | 48 | 6 | 13 | 15 | ♐ 24 | 44 | 35 | ♐ 24 | 42 | 27 | −2 | 8 |
| | 22 | 14 | 2 | 39 | 11 | 7 | 42 | 6 | 27 | 54 | ♑ 10 | 32 | 5 | ♑ 10 | 31 | 21 | −0 | 44 |
| | 23 | 15 | 4 | 28 | 11 | 8 | 35 | 7 | 12 | 23 | ♑ 26 | 3 | 21 | ♑ 26 | 2 | 29 | −0 | 52 |
| | 24 | 16 | 1 | 6 | 11 | 9 | 28 | 7 | 26 | 36 | ♒ 11 | 10 | 31 | ♒ 11 | 9 | 21 | −1 | 10 |
| | 26 | 17 | 40 | 50 | 11 | 11 | 13 | 8 | 23 | 58 | ♓ 10 | 4 | 32 | ♓ 10 | 2 | 14 | −2 | 18 |
| | 27 | 18 | 26 | 22 | 11 | 12 | 6 | 9 | 7 | 2 | ♓ 23 | 53 | 15 | ♓ 23 | 50 | 27 | −2 | 48 |
| | 28 | 19 | 10 | 44 | 11 | 12 | 58 | 9 | 19 | 41 | ♈ 7 | 19 | 34 | ♈ 7 | 17 | 20 | −2 | 14 |
| *Maii.* | 30 | 20 | 40 | 37 | 11 | 14 | 43 | 10 | 13 | 52 | ♉ 3 | 21 | 22 | ♉ 3 | 20 | 4 | −0 | 40 |
| *Junii.* | 9 | 3 | 48 | 26 | 11 | 22 | 36 | 1 | 25 | 8 | ♌ 24 | 26 | 59 | ♌ 24 | 25 | 35 | −1 | 24 |
| | 10 | 4 | 30 | 32 | 11 | 23 | 28 | 2 | 6 | 49 | ♍ 7 | 0 | 17 | ♍ 6 | 57 | 23 | −2 | 54 |
| | 11 | 5 | 12 | 39 | 11 | 24 | 21 | 2 | 18 | 53 | ♍ 19 | 50 | 2 | ♍ 19 | 48 | 50 | −1 | 12 |
| | 13 | 6 | 41 | 48 | 11 | 26 | 6 | 3 | 14 | 9 | ♎ 16 | 40 | 37 | ♎ 16 | 38 | 54 | −1 | 43 |
| *Cent.* | 18 | 11 | 39 | 17 | 0 | 0 | 31 | 5 | 24 | 31 | ♐ 2 | 19 | 22 | ♐ 2 | 15 | 48 | −3 | 34 |
| *Cent.* | 19 | 12 | 44 | 17 | 0 | 1 | 24 | 6 | 9 | 13 | ♐ 18 | 13 | 20 | ♐ 18 | 11 | 6 | −2 | 14 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXX. Currente.

| Transitus Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | H. | D. | ′ | ″ | S. | o | ′ | S. | o | ′ | ☌ | ′ | ″ | ☌ | ′ | ″ | ′ | ″ |
| Junii. | 21 | 14 | 42 | 7 | 0 | 3 | 10 | 7 | 8 | 7 | ♒ | 19 | 18 | 40 | ♒ | 19 | 18 | 27 | —0 | 13 |
| | 23 | 16 | 21 | 18 | 0 | 4 | 55 | 8 | 5 | 39 | ♓ | 18 | 39 | 4 | ♓ | 18 | 40 | 28 | +1 | 24 |
| | 28 | 20 | 13 | 21 | 0 | 9 | 17 | 10 | 7 | 26 | ♉ | 24 | 38 | 3 | ♉ | 24 | 38 | 30 | +0 | 27 |
| ∴ | 29 | 21 | 3 | 0 | 0 | 10 | 10 | 10 | 18 | 52 | ♊ | 7 | 2 | 2 | ♊ | 7 | 3 | 30 | +1 | 28 |
| Julii. | 7 | 2 | 29 | 51 | 0 | 16 | 18 | ☊ | 7 | 3 | ♍ | 3 | 1 | 10 | ♍ | 2 | 59 | 32 | —1 | 38 |
| | 14 | 8 | 12 | 16 | 0 | 22 | 26 | 4 | 6 | 54 | ♐ | 8 | 59 | 22 | ♐ | 8 | 54 | 56 | —4 | 26 |
| | 16 | 10 | 21 | 29 | 0 | 24 | 13 | 5 | 5 | 48 | ♑ | 9 | 58 | 21 | ♑ | 9 | 53 | 58 | —4 | 23 |
| Cent. | 17 | 11 | 25 | 36 | 0 | 25 | 6 | 5 | 20 | 25 | ♑ | 25 | 43 | 19 | ♑ | 25 | 39 | 31 | —3 | 48 |
| | 19 | 13 | 20 | 0 | 0 | 26 | 52 | 6 | 19 | 7 | ♒ | 26 | 47 | 34 | ♒ | 26 | 46 | 24 | —1 | 10 |
| Cent. | 21 | 14 | 58 | 0 | 0 | 28 | 38 | 7 | 16 | 34 | ♓ | 26 | 26 | 25 | ♓ | 26 | 25 | 3 | —1 | 22 |
| | 22 | 15 | 46 | 0 | 0 | 29 | 30 | 7 | 29 | 43 | ♈ | 10 | 32 | 25 | ♈ | 10 | 32 | 1 | —0 | 24 |
| | 23 | 16 | 32 | 53 | 1 | 0 | 23 | 8 | 12 | 29 | ♈ | 24 | 12 | 17 | ♈ | 24 | 10 | 2 | —2 | 15 |
| | 24 | 17 | 20 | 7 | 1 | 1 | 16 | 8 | 24 | 52 | ♉ | 7 | 22 | 34 | ♉ | 7 | 22 | 29 | —0 | 5 |
| | 25 | 18 | 8 | 40 | 1 | 2 | 9 | 9 | 6 | 55 | ♉ | 20 | 13 | 54 | ♉ | 20 | 13 | 38 | —0 | 16 |
| Julii. | 26 | 18 | 58 | 24 | 1 | 3 | 2 | 9 | 18 | 42 | ♊ | 2 | 48 | 24 | ♊ | 2 | 49 | 10 | +0 | 46 |
| Aug. | 6 | 2 | 37 | 0 | 1 | 11 | 51 | 1 | 13 | 3 | ♋ | 7 | 48 | 29 | ♋ | 7 | 48 | 27 | —0 | 2 |
| | 7 | 3 | 22 | 36 | 1 | 12 | 43 | 1 | 25 | 29 | ♋ | 21 | 14 | 57 | ♋ | 21 | 15 | 19 | +0 | 22 |
| | 11 | 7 | 2 | 42 | 1 | 16 | 17 | 3 | 19 | 4 | ♌ | 18 | 7 | 27 | ♌ | 18 | 5 | 50 | —1 | 37 |
| | 12 | 8 | 5 | 22 | 1 | 17 | 11 | 4 | 2 | 14 | ♍ | 3 | 7 | 43 | ♍ | 3 | 5 | 17 | —2 | 26 |
| | 13 | 9 | 7 | 19 | 1 | 18 | 4 | 4 | 17 | 33 | ♍ | 18 | 20 | 28 | ♍ | 18 | 17 | 53 | —2 | 35 |
| | 14 | 10 | 6 | 37 | 1 | 18 | 58 | 5 | 1 | 50 | ♎ | 3 | 40 | 5 | ♎ | 3 | 37 | 21 | —2 | 44 |
| | 15 | 11 | 2 | 27 | 1 | 19 | 51 | 5 | 16 | 1 | ♎ | 19 | 0 | 37 | ♎ | 18 | 57 | 38 | —2 | 59 |
| Cent. | 16 | 11 | 56 | 2 | 1 | 20 | 45 | 6 | 0 | 0 | ♏ | 4 | 12 | 58 | ♏ | 4 | 10 | 52 | —2 | 6 |
| | 17 | 12 | 47 | 0 | 1 | 21 | 38 | 6 | 13 | 42 | ♏ | 19 | 9 | 41 | ♏ | 19 | 8 | 40 | —1 | 1 |
| | 18 | 13 | 35 | 24 | 1 | 22 | 32 | 6 | 27 | 4 | ♐ | 3 | 45 | 11 | ♐ | 3 | 44 | 14 | —0 | 57 |
| | 19 | 14 | 23 | 16 | 1 | 23 | 25 | 7 | 10 | 5 | ♐ | 17 | 54 | 55 | ♐ | 17 | 54 | 19 | —0 | 36 |
| | 20 | 15 | 11 | 34 | 1 | 24 | 18 | 7 | 22 | 45 | ♑ | 1 | 38 | 25 | ♑ | 1 | 37 | 38 | —0 | 47 |
| | 21 | 16 | 0 | 46 | 1 | 25 | 12 | 8 | 5 | 7 | ♑ | 14 | 56 | 19 | ♑ | 14 | 55 | 12 | —1 | 7 |
| | 23 | 17 | 41 | 56 | 1 | 26 | 59 | 8 | 29 | 0 | ♒ | 10 | 27 | 29 | ♒ | 10 | 26 | 31 | —0 | 58 |
| | 24 | 18 | 32 | 56 | 1 | 27 | 52 | 9 | 10 | 36 | ♒ | 22 | 50 | 15 | ♒ | 22 | 49 | 29 | —0 | 46 |
| | 25 | 19 | 23 | 9 | 1 | 28 | 46 | 9 | 22 | 4 | ♋ | 5 | 4 | 34 | ♋ | 5 | 4 | 17 | —0 | 17 |
| | 26 | 20 | 11 | 55 | 1 | 29 | 40 | 10 | 3 | 26 | ♋ | 17 | 15 | 57 | ♋ | 17 | 16 | 13 | +0 | 16 |
| | 28 | 21 | 42 | 55 | 2 | 1 | 26 | 10 | 26 | 6 | ♌ | 11 | 49 | 41 | ♌ | 11 | 50 | 18 | +0 | 37 |
| Aug. | 29 | 22 | 27 | 41 | 2 | 2 | 20 | 11 | 7 | 32 | ♌ | 24 | 21 | 47 | ♌ | 24 | 22 | 4 | +0 | 17 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXX. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o | ′ | S. | o | ′ | ☌ | ′ | ″ | ☌ | ′ | ″ | ′ | ″ |
| *Sept.* | 7 | 4 | 56 | 8 | 2 | 9 | 30 | 2 | 17 | 46 | ♐ 13 | 30 | 11 | ♐ 13 | 32 | 27 | +2 | 16 |
| | 9 | 6 | 58 | 55 | 2 | 11 | 19 | 3 | 15 | 40 | ♑ 12 | 52 | 25 | ♑ 12 | 51 | 45 | −0 | 40 |
| | 13 | 10 | 33 | 36 | 2 | 14 | 55 | 5 | 11 | 7 | ♓ 12 | 10 | 31 | ♓ 12 | 10 | 19 | −0 | 12 |
| | 16 | 13 | 0 | 44 | 2 | 17 | 38 | 6 | 20 | 14 | ♈ 25 | 11 | 14 | ♈ 25 | 11 | 27 | +0 | 13 |
| *Sept.* | 18 | 14 | 40 | 55 | 2 | 19 | 26 | 7 | 14 | 51 | ♉ 22 | 9 | 45 | ♉ 22 | 8 | 26 | −1 | 19 |
| *Octo.* | 3 | 1 | 50 | 54 | 3 | 2 | 8 | 1 | 2 | 46 | ♎ 24 | 20 | 9 | ♎ 24 | 20 | 5 | −0 | 4 |
| | 5 | 3 | 51 | 28 | 3 | 3 | 58 | 2 | 0 | 9 | ♐ 23 | 43 | 16 | ♐ 23 | 45 | 45 | +2 | 29 |
| | 10 | 8 | 29 | 16 | 3 | 8 | 33 | 4 | 9 | 16 | ♓ 6 | 42 | 29 | ♓ 6 | 44 | 10 | +1 | 41 |
| | 13 | 10 | 50 | 38 | 3 | 11 | 17 | 5 | 18 | 9 | ♈ 19 | 7 | 27 | ♈ 19 | 9 | 44 | +2 | 17 |
| | 15 | 12 | 30 | 33 | 3 | 13 | 7 | 6 | 12 | 39 | ♉ 16 | 18 | 38 | ♉ 16 | 19 | 57 | +1 | 19 |
| | 21 | 17 | 31 | 7 | 3 | 18 | 38 | 8 | 21 | 59 | ♌ 1 | 41 | 44 | ♌ 1 | 39 | 44 | −2 | 0 |
| | 23 | 18 | 58 | 4 | 3 | 20 | 28 | 9 | 15 | 0 | ♌ 26 | 15 | 40 | ♌ 26 | 13 | 21 | −2 | 19 |
| *Octo.* | 26 | 21 | 7 | 17 | 3 | 23 | 12 | 10 | 21 | 4 | ♎ 5 | 12 | 2 | ♎ 5 | 8 | 18 | −3 | 44 |
| *Nov.* | 2 | 2 | 43 | 41 | 3 | 28 | 47 | 1 | 11 | 38 | ♑ 3 | 18 | 27 | ♑ 3 | 18 | 58 | +0 | 31 |
| | 3 | 3 | 44 | 50 | 3 | 29 | 43 | 1 | 25 | 47 | ♑ 18 | 24 | 35 | ♑ 18 | 24 | 5 | −0 | 30 |
| | 4 | 4 | 42 | 11 | 4 | 0 | 38 | 2 | 9 | 52 | ♒ 3 | 18 | 22 | ♒ 3 | 19 | 37 | +1 | 15 |
| | 5 | 5 | 35 | 30 | 4 | 1 | 34 | 2 | 23 | 48 | ♒ 17 | 58 | 45 | ♒ 17 | 59 | 12 | +0 | 27 |
| | 6 | 6 | 25 | 16 | 4 | 2 | 30 | 3 | 7 | 28 | ♓ 2 | 23 | 28 | ♓ 2 | 23 | 46 | +0 | 18 |
| | 7 | 7 | 12 | 40 | 4 | 3 | 25 | 3 | 20 | 51 | ♓ 16 | 34 | 13 | ♓ 16 | 34 | 59 | +0 | 46 |
| | 9 | 8 | 45 | 11 | 4 | 5 | 16 | 4 | 16 | 36 | ♈ 14 | 16 | 39 | ♈ 14 | 18 | 46 | +2 | 7 |
| | 10 | 9 | 32 | 20 | 4 | 6 | 12 | 4 | 28 | 59 | ♈ 27 | 48 | 31 | ♈ 27 | 52 | 5 | +3 | 34 |
| | 11 | 10 | 21 | 11 | 4 | 7 | 7 | 5 | 11 | 5 | ♉ 11 | 9 | 54 | ♉ 11 | 12 | 37 | +2 | 43 |
| | 13 | 12 | 5 | 40 | 4 | 8 | 59 | 6 | 4 | 30 | ♊ 7 | 13 | 3 | ♊ 7 | 14 | 32 | +1 | 29 |
| | 17 | 15 | 25 | 16 | 4 | 12 | 42 | 7 | 19 | 34 | ♋ 26 | 53 | 43 | ♋ 26 | 51 | 55 | −1 | 48 |
| | 18 | 16 | 9 | 56 | 4 | 13 | 37 | 8 | 0 | 47 | ♌ 9 | 2 | 18 | ♌ 9 | 0 | 15 | −2 | 3 |
| | 19 | 16 | 52 | 40 | 4 | 14 | 33 | 8 | 12 | 7 | ♌ 21 | 12 | 45 | ♌ 21 | 10 | 54 | −1 | 51 |
| | 20 | 17 | 34 | 18 | 4 | 15 | 28 | 8 | 23 | 37 | ♍ 3 | 31 | 20 | ♍ 3 | 29 | 29 | −1 | 51 |
| | 22 | 18 | 58 | 8 | 4 | 17 | 19 | 9 | 17 | 22 | ♍ 28 | 57 | 11 | ♍ 28 | 53 | 3 | −4 | 8 |
| | 23 | 19 | 42 | 42 | 4 | 18 | 15 | 9 | 29 | 45 | ♎ 12 | 15 | 38 | ♎ 12 | 11 | 48 | −3 | 50 |
| | 24 | 20 | 30 | 39 | 4 | 19 | 11 | 10 | 12 | 31 | ♎ 26 | 3 | 27 | ♎ 25 | 59 | 14 | −4 | 13 |
| *Nov.* | 25 | 21 | 23 | 12 | 4 | 20 | 7 | 10 | 25 | 42 | ♍ 10 | 23 | 22 | ♍ 10 | 18 | 54 | −4 | 28 |
| *Dec.* | 1 | 2 | 31 | 18 | 4 | 24 | 48 | 1 | 6 | 17 | ♑ 27 | 14 | 18 | ♑ 27 | 14 | 28 | +0 | 10 |
| | 5 | 5 | 57 | 16 | 4 | 28 | 33 | 3 | 1 | 48 | ♓ 26 | 18 | 28 | ♓ 26 | 18 | 48 | +0 | 20 |
| | 8 | 8 | 17 | 54 | 5 | 1 | 20 | 4 | 9 | 43 | ♉ 6 | 56 | 26 | ♉ 6 | 58 | 7 | +1 | 41 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

## Anno JULIANO MDCCXXX. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | ○ | ′ | S. | ○ | ′ | ○ | ′ | ″ | ☊ | ′ | ″ | ′ | ″ |
| Dec. | 9 | 9 | 7 | 13 | 5 | 2 | 16 | 4 | 21 | 39 | ♉ 19 | 58 | 23 | ♉ 20 | 0 | 3 | +1 | 40 |
| | 10 | 9 | 57 | 57 | 5 | 3 | 12 | 5 | 3 | 18 | ♊ 2 | 47 | 28 | ♊ 2 | 49 | 11 | +1 | 43 |
| | 11 | 10 | 49 | 30 | 5 | 4 | 8 | 5 | 14 | 42 | ♊15 | 25 | 56 | ♊15 | 26 | 58 | +1 | 2 |
| | 12 | 11 | 40 | 46 | 5 | 5 | 4 | 5 | 25 | 55 | ♊27 | 54 | 0 | ♊27 | 53 | 17 | −0 | 43 |
| | 13 | 12 | 33 | 0 | 5 | 6 | 0 | 6 | 7 | 0 | ♋10 | 15 | 28 | ♋10 | 15 | 6 | −0 | 22 |
| | 14 | 13 | 20 | 53 | 5 | 6 | 56 | 6 | 18 | 0 | ♋22 | 29 | 5 | ♋22 | 27 | 59 | −1 | 6 |
| | 15 | 14 | 6 | 24 | 5 | 7 | 52 | 6 | 28 | 59 | ♌ 4 | 39 | 11 | ♌ 4 | 37 | 7 | −2 | 4 |
| | 16 | 14 | 49 | 41 | 5 | 8 | 48 | 7 | 10 | 2 | ♌16 | 48 | 9 | ♌16 | 45 | 24 | −2 | 45 |
| | 17 | 15 | 31 | 23 | 5 | 9 | 44 | 7 | 21 | 12 | ♌28 | 59 | 42 | ♌28 | 57 | 5 | −2 | 37 |
| Dec. | 23 | 20 | 2 | 31 | 5 | 15 | 19 | 10 | 4 | 26 | ♍17 | 35 | 40 | ♍17 | 31 | 56 | −3 | 44 |

## Anno JULIANO MDCCXXXI. Currente.

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan. | 1 | 3 | 51 | 11 | 5 | 22 | 49 | 1 | 28 | 17 | ♓20 | 47 | 17 | ♓20 | 49 | 18 | +2 | 1 |
| | 3 | 5 | 27 | 2 | 5 | 24 | 41 | 2 | 24 | 56 | ♈19 | 12 | 52 | ♈19 | 13 | 17 | +0 | 25 |
| | 4 | 6 | 15 | 8 | 5 | 25 | 37 | 3 | 7 | 38 | ♉ 2 | 45 | 40 | ♉ 2 | 45 | 26 | −0 | 14 |
| | 6 | 7 | 54 | 32 | 5 | 27 | 29 | 4 | 1 | 54 | ♉28 | 48 | 5 | ♉28 | 47 | 47 | −0 | 18 |
| | 7 | 8 | 45 | 37 | 5 | 28 | 25 | 4 | 13 | 32 | ♊11 | 25 | 27 | ♊11 | 25 | 20 | −0 | 7 |
| | 8 | 9 | 36 | 43 | 5 | 29 | 21 | 4 | 24 | 55 | ♊23 | 51 | 22 | ♊23 | 51 | 33 | +0 | 11 |
| | 16 | 15 | 33 | 40 | 6 | 6 | 46 | 7 | 23 | 50 | ♋ 2 | 14 | 55 | ♋ 2 | 10 | 52 | −4 | 3 |
| | 19 | 17 | 52 | 20 | 6 | 9 | 33 | 9 | 0 | 39 | ♍11 | 44 | 0 | ♍11 | 41 | 9 | −2 | 51 |
| | 20 | 18 | 46 | 34 | 6 | 10 | 29 | 9 | 13 | 47 | ♍25 | 41 | 38 | ♍25 | 37 | 30 | −4 | 8 |
| | 22 | 20 | 47 | 16 | 6 | 12 | 21 | 10 | 11 | 22 | ♐25 | 2 | 16 | ♐24 | 58 | 4 | −4 | 12 |
| Jan. | 29 | 2 | 28 | 24 | 6 | 17 | 56 | 1 | 7 | 27 | ♓28 | 21 | 44 | ♓28 | 24 | 45 | +3 | 1 |
| Feb. | 1 | 4 | 58 | 12 | 6 | 20 | 43 | 2 | 17 | 7 | ♉11 | 2 | 5 | ♉11 | 2 | 19 | +0 | 14 |
| | 2 | 5 | 49 | 14 | 6 | 21 | 39 | 2 | 29 | 32 | ♉24 | 17 | 28 | ♉24 | 16 | 55 | −0 | 33 |
| | 3 | 6 | 40 | 50 | 6 | 22 | 34 | 3 | 11 | 36 | ♊ 7 | 9 | 56 | ♊ 7 | 8 | 45 | −1 | 11 |
| | 4 | 7 | 32 | 20 | 6 | 23 | 30 | 3 | 23 | 21 | ♊19 | 44 | 6 | ♊19 | 42 | 49 | −1 | 17 |
| | 5 | 8 | 22 | 55 | 6 | 24 | 25 | 4 | 4 | 50 | ♋ 2 | 4 | 52 | ♋ 2 | 4 | 4 | −0 | 48 |
| | 6 | 9 | 11 | 55 | 6 | 25 | 20 | 4 | 15 | 58 | ♋14 | 17 | 46 | ♋14 | 17 | 6 | −0 | 40 |
| | 7 | 9 | 58 | 52 | 6 | 26 | 16 | 4 | 27 | 12 | ♋26 | 27 | 24 | ♋26 | 26 | 16 | −1 | 8 |
| | 8 | 10 | 43 | 43 | 6 | 27 | 11 | 5 | 8 | 27 | ♌ 8 | 37 | 18 | ♌ 8 | 35 | 12 | −2 | 6 |
| | 9 | 11 | 26 | 45 | 6 | 28 | 6 | 5 | 19 | 13 | ♌20 | 50 | 26 | ♌20 | 47 | 24 | −3 | 2 |
| | 12 | 13 | 33 | 15 | 7 | 0 | 51 | 6 | 22 | 47 | ♍28 | 15 | 27 | ♍28 | 10 | 10 | −5 | 17 |
| | 13 | 14 | 16 | 0 | 7 | 1 | 46 | 7 | 4 | 24 | ♎11 | 4 | 10 | ♎10 | 59 | 0 | −5 | 10 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXI. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | ° | ′ | S. | ° | ′ | ° | ′ | ″ | ° | ′ | ″ | ′ | ″ |
| *Mart.* | 2 | 4 | 31 | 55 | 7 | 16 | 28 | 2 | 8 | 46 | ♊ 1 | 53 | 56 | ♊ 1 | 55 | 4 | +1 | 8 |
| | 3 | 5 | 24 | 46 | 7 | 17 | 22 | 2 | 20 | 56 | ♊14 | 52 | 31 | ♊14 | 51 | 38 | −0 | 53 |
| | 5 | 7 | 6 | 34 | 7 | 19 | 12 | 3 | 14 | 35 | ♋ 9 | 50 | 41 | ♋ 9 | 49 | 42 | −0 | 59 |
| | 6 | 7 | 54 | 22 | 7 | 20 | 7 | 3 | 25 | 47 | ♋22 | 2 | 57 | ♋22 | 1 | 54 | −1 | 3 |
| | 7 | 8 | 39 | 57 | 7 | 21 | 1 | 4 | 7 | 3 | ♌ 4 | 12 | 20 | ♌ 4 | 11 | 26 | −0 | 54 |
| | 9 | 10 | 5 | 47 | 7 | 22 | 50 | 4 | 29 | 28 | ♌28 | 40 | 45 | ♌28 | 38 | 56 | −1 | 49 |
| | 10 | 10 | 47 | 20 | 7 | 23 | 44 | 5 | 10 | 43 | ♍11 | 8 | 15 | ♍11 | 5 | 14 | −3 | 1 |
| | 13 | 12 | 58 | 44 | 7 | 26 | 27 | 6 | 15 | 32 | ♎19 | 50 | 28 | ♎19 | 44 | 43 | −5 | 45 |
| | 14 | 13 | 46 | 21 | 7 | 27 | 21 | 6 | 27 | 39 | ♏ 3 | 12 | 25 | ♏ 3 | 7 | 1 | −5 | 24 |
| | 16 | 15 | 31 | 58 | 7 | 29 | 10 | 7 | 22 | 56 | ♐ 0 | 39 | 35 | ♐ 0 | 34 | 31 | −5 | 4 |
| : : | 19 | 18 | 27 | 28 | 8 | 1 | 54 | 9 | 3 | 26 | ♑13 | 30 | 28 | ♑13 | 23 | 46 | −6 | 42 |
| | 22 | 21 | 12 | 19 | 8 | 4 | 37 | 10 | 15 | 33 | ♒28 | 2 | 23 | ♒27 | 57 | 10 | −5 | 13 |
| | 29 | 2 | 19 | 22 | 8 | 10 | 1 | 1 | 5 | 50 | ♉25 | 41 | 34 | ♉25 | 41 | 39 | +0 | 5 |
| | 30 | 3 | 13 | 24 | 8 | 10 | 56 | 1 | 18 | 12 | ♊ 9 | 6 | 29 | ♊ 9 | 5 | 52 | −0 | 37 |
| *Mart.* | 31 | 4 | 6 | 46 | 8 | 11 | 50 | 2 | 0 | 19 | ♊22 | 7 | 10 | ♊22 | 6 | 27 | −0 | 43 |
| *Apri.* | 2 | 5 | 48 | 40 | 8 | 13 | 37 | 2 | 23 | 49 | ♋17 | 9 | 43 | ♋17 | 10 | 31 | +0 | 48 |
| | 5 | 8 | 1 | 13 | 8 | 16 | 18 | 3 | 28 | 6 | ♌23 | 47 | 56 | ♌23 | 46 | 53 | −1 | 3 |
| | 6 | 8 | 42 | 50 | 8 | 17 | 12 | 4 | 9 | 31 | ♍ 6 | 8 | 48 | ♍ 6 | 7 | 22 | −1 | 26 |
| | 9 | 10 | 51 | 2 | 8 | 19 | 52 | 5 | 14 | 36 | ♎14 | 38 | 55 | ♎14 | 36 | 24 | −2 | 31 |
| *Cent.* | 10 | 11 | 39 | 16 | 8 | 20 | 46 | 5 | 26 | 45 | ♎28 | 6 | 40 | ♎28 | 3 | 2 | −3 | 38 |
| | 12 | 13 | 25 | 40 | 8 | 22 | 33 | 6 | 22 | 2 | ♏25 | 55 | 8 | ♏25 | 50 | 54 | −4 | 14 |
| | 14 | 15 | 22 | 58 | 8 | 24 | 21 | 7 | 18 | 35 | ♐24 | 35 | 28 | ♐24 | 32 | 28 | −3 | 0 |
| : : | 16 | 17 | 20 | 10 | 8 | 26 | 8 | 8 | 16 | 6 | ♑23 | 44 | 31 | ♑23 | 40 | 39 | −3 | 52 |
| *Apri.* | 27 | 1 | 55 | 22 | 9 | 5 | 2 | 0 | 28 | 26 | ♊16 | 23 | 12 | ♊16 | 21 | 32 | −1 | 40 |
| *Maii.* | 4 | 7 | 18 | 39 | 9 | 11 | 13 | 3 | 19 | 28 | ♍13 | 22 | 23 | ♍13 | 21 | 12 | −1 | 11 |
| | 5 | 8 | 0 | 10 | 9 | 12 | 6 | 4 | 1 | 10 | ♍25 | 57 | 19 | ♍25 | 56 | 31 | −0 | 48 |
| | 6 | 8 | 43 | 14 | 9 | 12 | 59 | 4 | 13 | 5 | ♎ 8 | 51 | 17 | ♎ 8 | 50 | 12 | −1 | 5 |
| | 7 | 9 | 28 | 55 | 9 | 13 | 52 | 4 | 25 | 16 | ♎22 | 7 | 31 | ♎22 | 5 | 51 | −1 | 40 |
| : : | 8 | 10 | 18 | 12 | 9 | 14 | 45 | 5 | 7 | 46 | ♏ 5 | 47 | 37 | ♏ 5 | 45 | 42 | −1 | 55 |
| | 9 | 11 | 11 | 42 | 9 | 15 | 38 | 5 | 20 | 37 | ♏19 | 51 | 50 | ♏19 | 50 | 37 | −1 | 13 |
| | 12 | 14 | 13 | 40 | 9 | 18 | 18 | 7 | 1 | 4 | ♐ 3 | 53 | 54 | ♐ 3 | 53 | 10 | −0 | 44 |
| | 13 | 15 | 13 | 37 | 9 | 19 | 11 | 7 | 15 | 2 | ♐18 | 51 | 13 | ♐18 | 50 | 56 | −0 | 17 |
| | 14 | 16 | 10 | 41 | 9 | 20 | 4 | 7 | 29 | 5 | ♒ 3 | 48 | 1 | ♒ 3 | 46 | 55 | −1 | 6 |
| | 17 | 18 | 43 | 58 | 9 | 22 | 42 | 9 | 10 | 52 | ♓17 | 54 | 54 | ♓17 | 51 | 35 | −3 | 19 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXI. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | H. | D. | ′ | ″ | S. | o | ′ | S. | o | ′ | ☊ | ′ | ″ | ☊ | ′ | ″ | ′ | ″ |
| Maii. | 19 | 20 | 20 | 37 | 9 | 24 | 28 | 10 | 7 | 42 | ♈ 16 | 30 | 20 | ♈ 16 | 26 | 48 | −3 | 32 |
| | 20 | 21 | 10 | 17 | 9 | 25 | 21 | 10 | 20 | 41 | ♉ 0 | 29 | 47 | ♉ 0 | 27 | 1 | −2 | 46 |
| | 21 | 22 | 1 | 34 | 9 | 26 | 14 | 11 | 3 | 20 | ♉ 14 | 15 | 51 | ♉ 14 | 14 | 14 | −1 | 37 |
| | 30 | 4 | 33 | 7 | 10 | 3 | 15 | 2 | 6 | 40 | ♌ 26 | 7 | 4 | ♌ 26 | 5 | 21 | −1 | 43 |
| Maii. | 31 | 5 | 14 | 0 | 10 | 4 | 8 | 2 | 18 | 5 | ♍ 8 | 19 | 32 | ♍ 8 | 18 | 56 | −0 | 36 |
| Junii. | 1 | 5 | 54 | 43 | 10 | 5 | 0 | 2 | 29 | 38 | ♍ 20 | 40 | 5 | ♍ 20 | 39 | 50 | −0 | 15 |
| | 4 | 8 | 6 | 44 | 10 | 7 | 38 | 4 | 5 | 46 | ♎ 29 | 24 | 14 | ♎ 29 | 22 | 24 | −1 | 50 |
| | 5 | 8 | 59 | 40 | 10 | 8 | 30 | 4 | 18 | 31 | ♏ 13 | 8 | 28 | ♏ 13 | 6 | 55 | −1 | 33 |
| | 6 | 9 | 53 | 9 | 10 | 9 | 23 | 5 | 1 | 37 | ♏ 27 | 20 | 25 | ♏ 27 | 18 | 4 | −2 | 21 |
| | 7 | 10 | 55 | 18 | 10 | 10 | 16 | 5 | 15 | 9 | ♐ 12. | 0 | 44 | ♐ 11 | 59 | 27 | −1 | 17 |
| Cent. | 8 | 11 | 56 | 21 | 10 | 11 | 9 | 5 | 28 | 59 | ♐ 27 | 2 | 49 | ♐ 27 | 1 | 40 | −1 | 9 |
| | 14 | 17 | 29 | 58 | 10 | 16 | 26 | 8 | 23 | 53 | ♓ 27 | 56 | 15 | ♓ 27 | 55 | 0 | −1 | 15 |
| | 26 | 2 | 30 | 16 | 10 | 26 | 4 | 1 | 6 | 24 | ♌ 21 | 39 | 0 | ♌ 21 | 36 | 36 | −2 | 24 |
| Junii. | 27 | 3 | 11 | 21 | 10 | 26 | 56 | 1 | 17 | 34 | ♍ 3 | 48 | 37 | ♍ 3 | 46 | 33 | −2 | 4 |
| Julii. | 2 | 6 | 46 | 15 | 11 | 1 | 18 | 3 | 16 | 24 | ♏ 6 | 54 | 5 | ♏ 6 | 52 | 55 | −1 | 10 |
| | 3 | 7 | 38 | 15 | 11 | 2 | 11 | 3 | 29 | 12 | ♏ 20 | 32 | 46 | ♏ 20 | 31 | 28 | −1 | 18 |
| | 4 | 8 | 34 | 49 | 11 | 3 | 4 | 4 | 12 | 27 | ♐ 4 | 42 | 19 | ♐ 4 | 40 | 24 | −1 | 55 |
| | 5 | 9 | 35 | 14 | 11 | 3 | 57 | 4 | 26 | 7 | ♐ 19 | 22 | 44 | ♐ 19 | 20 | 30 | −2 | 14 |
| | 6 | 10 | 37 | 42 | 11 | 4 | 50 | 5 | 10 | 10 | ♑ 4 | 31 | 21 | ♑ 4 | 29 | 1 | −2 | 20 |
| | 9 | 13 | 38 | 41 | 11 | 7 | 29 | 6 | 23 | 34 | ♒ 21 | 28 | 41 | ♒ 21 | 29 | 21 | +0 | 40 |
| | 11 | 15 | 23 | 41 | 11 | 9 | 15 | 7 | 22 | 17 | ♓ 22 | 21 | 17 | ♓ 22 | 22 | 23 | +1 | 6 |
| :: | 12 | 16 | 13 | 52 | 11 | 10 | 8 | 8 | 6 | 15 | ♈ 7 | 14 | 23 | ♈ 7 | 15 | 53 | +1 | 30 |
| | 14 | 17 | 54 | 44 | 11 | 11 | 53 | 9 | 3 | 7 | ♉ 5 | 44 | 40 | ♉ 5 | 44 | 2 | −0 | 38 |
| | 15 | 18 | 46 | 28 | 11 | 12 | 46 | 9 | 15 | 57 | ♉ 19 | 22 | 27 | ♉ 19 | 20 | 46 | −1 | 41 |
| | 17 | 20 | 31 | 44 | 11 | 14 | 32 | 10 | 10 | 28 | ♊ 15 | 35 | 32 | ♊ 15 | 33 | 23 | −2 | 9 |
| | 18 | 21 | 23 | 40 | 11 | 15 | 24 | 10 | 22 | 13 | ♊ 28 | 17 | 38 | ♊ 28 | 16 | 9 | −1 | 29 |
| Cent. | 27 | 3 | 13 | 10 | 11 | 22 | 25 | 1 | 21 | 33 | ♎ 6 | 30 | 47 | ♎ 6 | 31 | 54 | +1 | 7 |
| Julii. | 28 | 3 | 54 | 59 | 11 | 23 | 18 | 2 | 3 | 9 | ♎ 19 | 4 | 16 | ♎ 19 | 5 | 1 | +0 | 45 |
| Cent. | 30 | 5 | 30 | 18 | 11 | 25 | 4 | 2 | 27 | 26 | ♏ 14 | 59 | 38 | ♏ 15 | 1 | 4 | +1 | 26 |
| Aug. | 2 | 8 | 18 | 51 | 11 | 27 | 44 | 4 | 7 | 5 | ♐ 27 | 1 | 57 | ♐ 27 | 0 | 13 | −1 | 44 |
| | 4 | 10 | 20 | 21 | 11 | 29 | 30 | 5 | 5 | 30 | ♑ 27 | 27 | 50 | ♑ 27 | 25 | 1 | −2 | 49 |
| | 6 | 12 | 14 | 42 | 0 | 1 | 3 | 6 | 4 | 37 | ♒ 29 | 4 | 56 | ♒ 29 | 1 | 27 | −3 | 29 |
| | 8 | 14 | 3 | 13 | 0 | 3 | 4 | 7 | 3 | 33 | ♈ 0 | 28 | 45 | ♈ 0 | 28 | 18 | −0 | 27 |
| | 9 | 14 | 55 | 12 | 0 | 3 | 57 | 7 | 17 | 37 | ♈ 15 | 39 | 2 | ♈ 15 | 38 | 31 | −0 | 31 |

# LUNÆ MERIDIANÆ LONGITUDINES
## GRENOVICI OBSERVATÆ
## CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXI. Currente.

| Transitus Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o | ′ | S. | o | ′ | o | ′ | ″ | o | ′ | ″ | ′ | ″ |
| *Aug.* | 10 | 15 | 47 | 25 | 0 | 4 | 50 | 8 | 1 | 20 | ♉ 0 | 19 | 36 | ♉ 0 | 19 | 4 | −0 | 32 |
| | 11 | 16 | 40 | 24 | 0 | 5 | 44 | 8 | 14 | 39 | ♉ 14 | 30 | 49 | ♉ 14 | 28 | 28 | −2 | 21 |
| | 13 | 18 | 27 | 19 | 0 | 7 | 30 | 9 | 10 | 3 | ♊ 11 | 24 | 56 | ♊ 11 | 22 | 0 | −2 | 56 |
| | 25 | 2 | 38 | 33 | 0 | 17 | 17 | 1 | 14 | 44 | ♎ 27 | 48 | 28 | ♎ 27 | 49 | 3 | +0 | 35 |
| | 27 | 4 | 16 | 19 | 0 | 19 | 3 | 2 | 8 | 58 | ♏ 23 | 52 | 3 | ♏ 23 | 53 | 9 | +1 | 6 |
| | 28 | 5 | 10 | 15 | 0 | 19 | 57 | 2 | 21 | 39 | ♐ 7 | 19 | 31 | ♐ 7 | 20 | 5 | +0 | 34 |
| *Aug.* | 30 | 7 | 5 | 32 | 0 | 21 | 45 | 3 | 18 | 22 | ♑ 5 | 28 | 5 | ♑ 5 | 28 | 42 | +0 | 37 |
| *Sept.* | 1 | 9 | 1 | 49 | 0 | 23 | 33 | 4 | 16 | 29 | ♒ 5 | 20 | 53 | ♒ 5 | 18 | 16 | −2 | 37 |
| | 2 | 9 | 58 | 51 | 0 | 24 | 27 | 5 | 0 | 54 | ♒ 20 | 50 | 12 | ♒ 27 | 47 | 45 | −2 | 27 |
| | 3 | 10 | 53 | 9 | 0 | 25 | 21 | 5 | 15 | 22 | ♓ 6 | 32 | 58 | ♓ 6 | 30 | 7 | −2 | 51 |
| *Cent.* | 4 | 11 | 46 | 24 | 0 | 26 | 15 | 5 | 29 | 47 | ♓ 22 | 18 | 1 | ♓ 22 | 15 | 42 | −2 | 19 |
| *Cent.* | 5 | 12 | 39 | 24 | 0 | 27 | 8 | 6 | 14 | 3 | ♈ 7 | 54 | 47 | ♈ 7 | 52 | 46 | −2 | 1 |
| | 7 | 14 | 28 | 16 | 0 | 28 | 57 | 7 | 11 | 47 | ♉ 8 | 3 | 17 | ♉ 8 | 1 | 34 | −1 | 43 |
| | 8 | 15 | 23 | 22 | 0 | 29 | 51 | 7 | 25 | 7 | ♉ 22 | 23 | 32 | ♉ 22 | 21 | 13 | −2 | 19 |
| | 9 | 16 | 18 | 32 | 1 | 0 | 45 | 8 | 8 | 2 | ♊ 7 | 11 | 34 | ♊ 6 | 8 | 22 | −3 | 12 |
| | 10 | 17 | 12 | 52 | 1 | 1 | 39 | 8 | 20 | 35 | ♊ 19 | 30 | 27 | ♊ 19 | 26 | 22 | −4 | 5 |
| | 11 | 18 | 5 | 20 | 1 | 2 | 33 | 9 | 2 | 45 | ♋ 2 | 23 | 32 | ♋ 2 | 19 | 53 | −3 | 39 |
| | 12 | 18 | 55 | 18 | 1 | 3 | 27 | 9 | 14 | 35 | ♋ 14 | 57 | 35 | ♋ 14 | 54 | 18 | −3 | 17 |
| | 14 | 20 | 27 | 8 | 1 | 5 | 15 | 10 | 7 | 28 | ♌ 9 | 30 | 1 | ♌ 9 | 28 | 33 | −1 | 28 |
| | 17 | 22 | 31 | 51 | 1 | 7 | 57 | 11 | 10 | 50 | ♍ 16 | 6 | 50 | ♍ 16 | 7 | 26 | +0 | 36 |
| | 26 | 4 | 58 | 34 | 1 | 15 | 11 | 2 | 16 | 36 | ♑ 0 | 40 | 30 | ♑ 0 | 44 | 57 | +4 | 27 |
| | 29 | 7 | 45 | 58 | 1 | 17 | 55 | 3 | 27 | 49 | ♒ 14 | 10 | 28 | ♒ 14 | 10 | 24 | −0 | 4 |
| *Sept.* | 30 | 8 | 38 | 57 | 1 | 18 | 50 | 4 | 11 | 57 | ♒ 29 | 16 | 33 | ♒ 29 | 14 | 58 | −1 | 35 |
| *Octo.* | 1 | 9 | 31 | 0 | 1 | 19 | 45 | 4 | 26 | 8 | ♓ 14 | 34 | 32 | ♓ 14 | 32 | 42 | −1 | 50 |
| | 2 | 10 | 23 | 4 | 1 | 20 | 39 | 5 | 10 | 17 | ♓ 29 | 59 | 13 | ♓ 29 | 56 | 38 | −2 | 35 |
| | 3 | 11 | 15 | 50 | 1 | 21 | 34 | 5 | 24 | 17 | ♈ 15 | 20 | 9 | ♈ 15 | 17 | 23 | −2 | 46 |
| | 5 | 13 | 7 | 48 | 1 | 23 | 24 | 6 | 21 | 35 | ♉ 15 | 16 | 47 | ♉ 15 | 14 | 53 | −1 | 54 |
| | 6 | 14 | 4 | 20 | 1 | 24 | 19 | 7 | 4 | 46 | ♉ 29 | 39 | 3 | ♉ 29 | 35 | 49 | −3 | 14 |
| | 8 | 15 | 55 | 19 | 1 | 26 | 9 | 8 | 0 | 4 | ♊ 26 | 54 | 50 | ♊ 26 | 50 | 40 | −4 | 10 |
| | 9 | 16 | 47 | 27 | 1 | 27 | 4 | 8 | 12 | 13 | ♋ 9 | 52 | 38 | ♋ 9 | 48 | 16 | −4 | 22 |
| | 10 | 17 | 36 | 32 | 1 | 27 | 59 | 8 | 24 | 9 | ♋ 22 | 30 | 11 | ♋ 22 | 25 | 39 | −4 | 32 |
| | 11 | 18 | 22 | 34 | 1 | 28 | 53 | 9 | 5 | 41 | ♌ 4 | 52 | 20 | ♌ 4 | 47 | 57 | −4 | 23 |
| | 14 | 20 | 28 | 40 | 2 | 1 | 37 | 10 | 9 | 41 | ♍ 11 | 29 | 10 | ♍ 11 | 27 | 12 | −1 | 58 |
| | 15 | 21 | 9 | 33 | 2 | 2 | 32 | 10 | 20 | 58 | ♍ 23 | 49 | 26 | ♍ 23 | 48 | 14 | −1 | 12 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXI. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o | ′ | S. | o | ′ | o | ′ | ″ | ☾ | ′ | ″ | ′ | ″ |
| Octo. | 22 | 1 | 57 | 2 | 2 | 8 | 2 | 1 | 2 | 18 | ♌12 | 32 | 17 | ♌12 | 34 | 30 | +2 | 13 |
| | 23 | 2 | 54 | 8 | 2 | 8 | 58 | 1 | 15 | 12 | ♌26 | 28 | 44 | ♌26 | 31 | 54 | +3 | 10 |
| | 24 | 3 | 51 | 18 | 2 | 9 | 53 | 1 | 28 | 25 | ♍10 | 36 | 59 | ♍10 | 40 | 12 | +3 | 13 |
| | 26 | 5 | 44 | 42 | 2 | 11 | 45 | 2 | 25 | 38 | ♒ 9 | 24 | 3 | ♒ 9 | 27 | 48 | +3 | 45 |
| | 27 | 6 | 32 | 53 | 2 | 12 | 40 | 3 | 9 | 27 | ♒24 | 0 | 12 | ♒24 | 2 | 1 | +1 | 49 |
| Cent. | 28 | 7 | 24 | 33 | 2 | 13 | 35 | 3 | 23 | 23 | ♓ 8 | 46 | 1 | ♓ 8 | 47 | 30 | +1 | 29 |
| | 29 | 8 | 13 | 37 | 2 | 14 | 30 | 4 | 7 | 17 | ♓23 | 38 | 51 | ♓23 | 38 | 20 | −0 | 31 |
| | 30 | 9 | 4 | 17 | 2 | 15 | 26 | 4 | 21 | 6 | ♈ 8 | 33 | 31 | ♈ 8 | 32 | 49 | −0 | 42 |
| Octo. | 31 | 9 | 56 | 23 | 2 | 16 | 21 | 5 | 4 | 45 | ♈23 | 25 | 45 | ♈23 | 24 | 52 | −0 | 53 |
| Nov. | 1 | 10 | 50 | 23 | 2 | 17 | 16 | 5 | 18 | 11 | ♉ 8 | 9 | 29 | ♉ 8 | 8 | 27 | −1 | 2 |
| Cent. | 2 | 11 | 47 | 20 | 2 | 18 | 12 | 6 | 1 | 21 | ♉22 | 38 | 50 | ♉22 | 37 | 53 | −0 | 57 |
| | 4 | 13 | 41 | 32 | 2 | 20 | 4 | 6 | 26 | 47 | ♊20 | 35 | 30 | ♊20 | 33 | 8 | −2 | 22 |
| | 5 | 14 | 35 | 52 | 2 | 21 | 0 | 7 | 9 | 2 | ♋ 3 | 58 | 4 | ♋ 3 | 54 | 44 | −3 | 20 |
| | 7 | 16 | 15 | 16 | 2 | 22 | 51 | 8 | 2 | 46 | ♋29 | 37 | 24 | ♋29 | 32 | 56 | −4 | 28 |
| | 11 | 19 | 4 | 31 | 2 | 26 | 32 | 9 | 18 | 31 | ♍18 | 41 | 57 | ♍18 | 39 | 39 | −2 | 18 |
| | 23 | 4 | 30 | 6 | 3 | 6 | 46 | 2 | 7 | 14 | ♒19 | 37 | 57 | ♒19 | 40 | 10 | +2 | 13 |
| | 25 | 6 | 10 | 24 | 3 | 8 | 38 | 3 | 4 | 57 | ♓19 | 0 | 19 | ♓19 | 1 | 7 | +0 | 48 |
| Nov. | 29 | 9 | 35 | 12 | 3 | 12 | 22 | 4 | 28 | 42 | ♈16 | 43 | 0 | ♈16 | 42 | 29 | −0 | 31 |
| Cent. | 2 | 12 | 22 | 41 | 3 | 15 | 10 | 6 | 6 | 14 | ♊27 | 59 | 55 | ♊27 | 58 | 27 | −1 | 28 |
| Dec. | 4 | 14 | 6 | 35 | 3 | 17 | 2 | 6 | 29 | 53 | ♋24 | 4 | 51 | ♋24 | 2 | 11 | −2 | 40 |
| | 5 | 14 | 53 | 17 | 3 | 17 | 58 | 7 | 11 | 24 | ♌ 6 | 42 | 25 | ♌ 6 | 39 | 21 | −3 | 4 |
| | 6 | 15 | 37 | 10 | 3 | 18 | 54 | 7 | 22 | 47 | ♌19 | 6 | 53 | ♌19 | 3 | 59 | −2 | 54 |
| | 7 | 16 | 19 | 1 | 3 | 19 | 50 | 8 | 4 | 5 | ♍ 1 | 22 | 58 | ♍ 1 | 20 | 2 | −2 | 56 |
| | 8 | 16 | 59 | 40 | 3 | 20 | 45 | 8 | 15 | 23 | ♍13 | 35 | 1 | ♍13 | 32 | 17 | −2 | 44 |
| | 9 | 17 | 40 | 9 | 3 | 21 | 41 | 8 | 26 | 45 | ♍25 | 48 | 10 | ♍25 | 46 | 3 | −2 | 7 |
| | 13 | 20 | 40 | 33 | 3 | 25 | 24 | 10 | 14 | 3 | ♎16 | 44 | 47 | ♎16 | 43 | 14 | −1 | 33 |
| | 21 | 3 | 16 | 6 | 4 | 1 | 58 | 1 | 18 | 13 | ♒29 | 17 | 30 | ♒29 | 18 | 43 | +1 | 13 |
| | 24 | 5 | 47 | 23 | 4 | 4 | 46 | 2 | 29 | 58 | ♈13 | 47 | 38 | ♈13 | 47 | 9 | −0 | 29 |
| | 25 | 6 | 38 | 13 | 4 | 5 | 42 | 3 | 13 | 29 | ♈28 | 7 | 39 | ♈28 | 6 | 44 | −0 | 55 |
| | 26 | 7 | 30 | 30 | 4 | 6 | 38 | 3 | 26 | 42 | ♉12 | 12 | 21 | ♉12 | 10 | 56 | −1 | 25 |
| | 27 | 8 | 24 | 16 | 4 | 7 | 34 | 4 | 9 | 35 | ♉26 | 1 | 58 | ♉26 | 0 | 22 | −1 | 36 |
| | 29 | 10 | 13 | 21 | 4 | 9 | 27 | 5 | 4 | 22 | ♊22 | 57 | 7 | ♊22 | 55 | 59 | −1 | 8 |
| Cent. | 31 | 11 | 58 | 13 | 4 | 11 | 19 | 5 | 27 | 55 | ♋18 | 57 | 43 | ♋18 | 56 | 35 | −1 | 8 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXII. Currente.

| Transitus Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o | ′ | S. | o | ′ | o | ′ | ″, | o | ′ | ″ | ′ | ″ |
| Jan. | :: 4 | 14 | 56 | 0 | 4 | 15 | 2 | 7 | 12 | 51 | ♍ 8 | 45 | 18 | ♍ 8 | 43 | 32 | −1 | 46 |
| | :: 5 | 15 | 36 | 21 | 4 | 15 | 58 | 7 | 23 | 59 | ♍20 | 55 | 50 | ♍20 | 55 | 28 | −0 | 22 |
| | 8 | 17 | 42 | 45 | 4 | 18 | 44 | 8 | 28 | 16 | ♎27 | 56 | 38 | ♎27 | 56 | 15 | −0 | 23 |
| | 9 | 18 | 29 | 40 | 4 | 19 | 40 | 9 | 10 | 13 | ♏10 | 42 | 13 | ♏10 | 41 | 37 | −0 | 36 |
| | 10 | 19 | 20 | 13 | 4 | 20 | 36 | 9 | 22 | 30 | ♏23 | 49 | 42 | ♏23 | 48 | 42 | −1 | 0 |
| | 11 | 20 | 14 | 31 | 4 | 21 | 32 | 10 | 5 | 11 | ♐ 7 | 23 | 16 | ♐ 7 | 22 | 26 | −0 | 50 |
| | 12 | 21 | 12 | 6 | 4 | 22 | 28 | 10 | 18 | 16 | ♐21 | 27 | 25 | ♐21 | 26 | 30 | −0 | 55 |
| | :: 20 | 3 | 41 | 48 | 4 | 29 | 0 | 1 | 26 | 49 | ♈ 8 | 32 | 1 | ♈ 8 | 33 | 21 | +1 | 20 |
| Cent. | :21 | 4 | 34 | 58 | 4 | 29 | 56 | 2 | 10 | 45 | ♈23 | 22 | 6 | ♈23 | 24 | 28 | +2 | 22 |
| | 22 | 5 | 26 | 49 | 5 | 0 | 52 | 2 | 24 | 21 | ♉ 7 | 50 | 28 | ♉ 7 | 49 | 10 | −1 | 18 |
| | : : 24 | 7 | 15 | 4 | 5 | 2 | 44 | 3 | 20 | 27 | ♊ 5 | 31 | 43 | ♊ 5 | 28 | 26 | −3 | 17 |
| | 27 | 9 | 52 | 59 | 5 | 5 | 31 | 4 | 26 | 47 | ♋14 | 40 | 15 | ♋14 | 38 | 29 | −1 | 46 |
| | 28 | 10 | 41 | 15 | 5 | 6 | 27 | 5 | 8 | 15 | ♋27 | 17 | 0 | ♋27 | 15 | 36 | −1 | 24 |
| Jan. | 31 | 12 | 54 | 5 | 5 | 9 | 13 | 6 | 11 | 33 | ♌ 4 | 24 | 36 | ♌ 4 | 21 | 16 | −3 | 20 |
| Feb. | 2 | 14 | 15 | 17 | 5 | 11 | 3 | 7 | 3 | 28 | ♌28 | 49 | 49 | ♌28 | 46 | 10 | −3 | 39 |
| | 3 | 14 | 56 | 25 | 5 | 11 | 58 | 7 | 14 | 35 | ♍11 | 2 | 47 | ♍11 | 0 | 15 | −2 | 32 |
| | :: 6 | 17 | 11 | 57 | 5 | 14 | 44 | 8 | 19 | 17 | ♎18 | 30 | 41 | ♎18 | 30 | 0 | −0 | 41 |
| | 7 | 18 | 3 | 10 | 5 | 15 | 39 | 9 | 1 | 32 | ♐ 1 | 31 | 38 | ♐ 1 | 30 | 44 | −0 | 54 |
| | 8 | 18 | 57 | 26 | 5 | 16 | 35 | 9 | 14 | 12 | ♐14 | 55 | 48 | ♐14 | 55 | 17 | −0 | 31 |
| | 17 | 2 | 22 | 36 | 5 | 23 | 58 | 1 | 6 | 47 | ♈16 | 43 | 0 | ♈16 | 44 | 54 | +1 | 54 |
| | 19 | 4 | 12 | 57 | 5 | 25 | 49 | 2 | 4 | 40 | ♉16 | 38 | 33 | ♉16 | 37 | 48 | −0 | 45 |
| | 21 | 6 | 4 | 22 | 5 | 27 | 39 | 3 | 0 | 59 | ♊14 | 32 | 10 | ♊14 | 29 | 3 | −3 | 7 |
| | 22 | 6 | 58 | 21 | 5 | 28 | 35 | 3 | 13 | 31 | ♊27 | 48 | 15 | ♊27 | 44 | 44 | −3 | 31 |
| | 24 | 8 | 38 | 58 | 6 | 0 | 24 | 4 | 7 | 24 | ♋23 | 21 | 38 | ♋23 | 18 | 39 | −2 | 59 |
| | 25 | 9 | 25 | 10 | 6 | 1 | 19 | 4 | 18 | 51 | ♌ 5 | 48 | 24 | ♌ 5 | 45 | 52 | −2 | 32 |
| | 26 | 10 | 10 | 5 | 6 | 2 | 14 | 5 | 0 | 5 | ♌18 | 8 | 50 | ♌18 | 5 | 40 | −3 | 10 |
| Feb. | 28 | 11 | 31 | 54 | 6 | 4 | 3 | 5 | 22 | 3 | ♍12 | 34 | 33 | ♍12 | 31 | 30 | −3 | 3 |
| Cent. | 29 | 12 | 13 | 30 | 6 | 4 | 57 | 6 | 2 | 57 | ♍24 | 47 | 30 | ♍24 | 44 | 8 | −3 | 22 |
| Mart. | 2 | 13 | 37 | 52 | 6 | 6 | 46 | 6 | 24 | 59 | ♎19 | 21 | 10 | ♎19 | 17 | 12 | −3 | 58 |
| | 3 | 14 | 22 | 7 | 6 | 7 | 41 | 7 | 6 | 14 | ♏ 1 | 46 | 28 | ♏ 1 | 41 | 49 | −4 | 39 |
| | 6 | 16 | 50 | 15 | 6 | 10 | 25 | 8 | 11 | 46 | ♐10 | 5 | 13 | ♐10 | 2 | 4 | −3 | 9 |
| | 9 | 19 | 35 | 52 | 6 | 13 | 9 | 9 | 20 | 50 | ♑21 | 22 | 18 | ♑21 | 18 | 22 | −3 | 56 |
| | 10 | 20 | 31 | 11 | 6 | 14 | 4 | 10 | 4 | 40 | ♒ 6 | 3 | 41 | ♒ 5 | 59 | 3 | −4 | 38 |
| | 11 | 21 | 25 | 42 | 6 | 14 | 58 | 10 | 18 | 48 | ♒21 | 12 | 55 | ♒21 | 8 | 20 | −4 | 35 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXII. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ ☌ ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | H. | D. | ′ | ″ | S. | o | ′ | S. | o | ′ | ☌ | ′ | ″ | ☌ | ′ | ″ | ′ | ″ |
| Mart. | 20 | 4 | 49 | 59 | 6 | 22 | 15 | 2 | 11 | 7 | ♊22 | 42 | 10 | ♋22 | 40 | 35 | —1 | 35 |
| | 22 | 6 | 34 | 45 | 6 | 24 | 3 | 3 | 5 | 57 | ♋19 | 1 | 48 | ♋18 | 58 | 56 | —2 | 52 |
| | 23 | 7 | 22 | 14 | 6 | 24 | 57 | 3 | 17 | 48 | ♌ 1 | 38 | 39 | ♌ 1 | 36 | 37 | —2 | 2 |
| | 24 | 8 | 7 | 1 | 6 | 25 | 51 | 3 | 29 | 21 | ♌14 | 3 | 33 | ♌14 | 1 | 20 | —2 | 13 |
| | 25 | 8 | 49 | 33 | 6 | 26 | 45 | 4 | 10 | 40 | ♌26 | 19 | 10 | ♌26 | 17 | 23 | —1 | 47 |
| | 26 | 9 | 30 | 44 | 6 | 27 | 39 | 4 | 21 | 49 | ♍ 8 | 31 | 3 | ♍ 8 | 29 | 24 | —1 | 39 |
| | 27 | 10 | 11 | 22 | 6 | 28 | 32 | 5 | 2 | 52 | ♍20 | 42 | 32 | ♍20 | 41 | 1 | —1 | 31 |
| Mart. | 28 | 10 | 52 | 16 | 6 | 29 | 26 | 5 | 13 | 52 | ♎ 2 | 56 | 37 | ♎ 2 | 55 | 7 | —1 | 30 |
| Cent. | 29 | 11 | 35 | 18 | 7 | 0 | 20 | 5 | 24 | 57 | ♎15 | 16 | 28 | ♎15 | 14 | 44 | —1 | 44 |
| Apri. | 2 | 14 | 46 | 48 | 7 | 3 | 55 | 7 | 10 | 59 | ♐ 6 | 3 | 32 | ♐ 5 | 58 | 52 | —4 | 40 |
| : : | 15 | 1 | 36 | 42 | 7 | 14 | 41 | 0 | 24 | 43 | ♊ 1 | 42 | 46 | ♊ 1 | 42 | 26 | —0 | 20 |
| Cent. | 17 | 3 | 33 | 24 | 7 | 16 | 28 | 1 | 21 | 7 | ♋ 0 | 9 | 16 | ♋ 0 | 9 | 11 | —0 | 5 |
| | 19 | 5 | 15 | 53 | 7 | 18 | 15 | 2 | 16 | 0 | ♋26 | 40 | 39 | ♋26 | 39 | 46 | —0 | 53 |
| | 23 | 8 | 8 | 54 | 7 | 21 | 47 | 4 | 2 | 20 | ♍16 | 18 | 21 | ♍16 | 18 | 15 | —0 | 6 |
| | 25 | 9 | 31 | 15 | 7 | 23 | 33 | 4 | 24 | 47 | ♎10 | 49 | 1 | ♎10 | 49 | 2 | +0 | 1 |
| | 27 | 11 | 0 | 9 | 7 | 25 | 19 | 5 | 17 | 29 | ♏ 5 | 51 | 30 | ♏ 5 | 50 | 9 | —1 | 21 |
| Apri. | 29 | 12 | 40 | 59 | 7 | 27 | 6 | 6 | 10 | 56 | ♐ 1 | 43 | 54 | ♐ 1 | 40 | 28 | —3 | 26 |
| Maii. | 7 | 19 | 43 | 43 | 8 | 4 | 11 | 9 | 26 | 19 | ♓24 | 28 | 2 | ♓24 | 20 | 3 | —7 | 59 |
| | 8 | 20 | 35 | 16 | 8 | 5 | 4 | 10 | 10 | 24 | ♈ 9 | 29 | 35 | ♈ 9 | 21 | 35 | —8 | 0 |
| : : | 9 | 21 | 28 | 39 | 8 | 5 | 57 | 10 | 24 | 27 | ♈24 | 33 | 55 | ♈24 | 27 | 59 | —5 | 56 |
| | 14 | 1 | 17 | 9 | 8 | 9 | 30 | 0 | 18 | 42 | ♊23 | 28 | 48 | ♊23 | 26 | 48 | —2 | 0 |
| | 16 | 3 | 5 | 49 | 8 | 11 | 16 | 1 | 13 | 58 | ♋20 | 51 | 6 | ♋20 | 50 | 8 | —0 | 58 |
| | 17 | 3 | 54 | 48 | 8 | 12 | 9 | 1 | 26 | 7 | ♌ 3 | 56 | 16 | ♌ 3 | 55 | 28 | —0 | 48 |
| | 19 | 5 | 23 | 31 | 8 | 13 | 54 | 2 | 19 | 41 | ♌29 | 10 | 15 | ♌29 | 10 | 26 | +0 | 11 |
| | 20 | 6 | 5 | 0 | 8 | 14 | 46 | 3 | 1 | 11 | ♍11 | 29 | 37 | ♍11 | 29 | 43 | +0 | 6 |
| | 25 | 9 | 41 | 12 | 8 | 19 | 9 | 4 | 28 | 38 | ♏13 | 32 | 46 | ♏13 | 32 | 54 | +0 | 8 |
| | 27 | 11 | 24 | 57 | 8 | 20 | 54 | 5 | 22 | 42 | ♐ 9 | 53 | 10 | ♐ 9 | 51 | 54 | —1 | 16 |
| Maii. | 31 | 15 | 8 | 6 | 8 | 24 | 26 | 7 | 14 | 17 | ♒ 6 | 0 | 39 | ♒ 5 | 57 | 10 | —3 | 29 |
| Junii. | 1 | 16 | 0 | 10 | 8 | 25 | 19 | 7 | 27 | 51 | ♒20 | 32 | 8 | ♒20 | 28 | 31 | —3 | 37 |
| | 2 | 16 | 50 | 44 | 8 | 26 | 11 | 8 | 11 | 37 | ♓ 5 | 9 | 42 | ♓ 5 | 6 | 4 | —3 | 38 |
| | 3 | 17 | 40 | 40 | 8 | 27 | 4 | 8 | 25 | 31 | ♓19 | 51 | 50 | ♓19 | 47 | 35 | —4 | 15 |
| : : | 6 | 20 | 15 | 41 | 8 | 29 | 42 | 10 | 7 | 11 | ♉ 4 | 1 | 11 | ♉ 3 | 55 | 54 | —5 | 17 |
| | 15 | 3 | 17 | 42 | 9 | 6 | 44 | 1 | 18 | 23 | ♌23 | 54 | 32 | ♌23 | 54 | 38 | +0 | 6 |
| | 19 | 6 | 4 | 2 | 9 | 10 | 13 | 3 | 4 | 14 | ♎13 | 14 | 1 | ♎13 | 14 | 11 | +0 | 10 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXII. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | ○ | ′ | S. | ○ | ′ | ○ | ′ | ″ | ○ | ′ | ″ | ′ | ″ |
| *Junii.* | 21 | 7 | 32 | 44 | 9 | 11 | 58 | 3 | 27 | 28 | ♎ 8 | 3 | 36 | ♎ 8 | 5 | 8 | +1 | 32 |
| | 22 | 8 | 21 | 22 | 9 | 12 | 50 | 4 | 9 | 26 | ♎20 | 50 | 35 | ♎20 | 52 | 6 | +1 | 31 |
| | 23 | 9 | 13 | 15 | 9 | 13 | 43 | 4 | 21 | 32 | ♐ 3 | 58 | 20 | ♐ 3 | 59 | 18 | +0 | 58 |
| | 24 | 10 | 7 | 57 | 9 | 14 | 36 | 5 | 4 | 0 | ♐17 | 29 | 31 | ♐17 | 29 | 41 | +0 | 10 |
| | 25 | 11 | 4 | 22 | 9 | 15 | 29 | 5 | 16 | 47 | ♑ 1 | 24 | 13 | ♑ 1 | 24 | 10 | −0 | 3 |
| *Junii.* | 29 | 14 | 46 | 18 | 9 | 19 | 0 | 7 | 10 | 49 | ♓ 0 | 11 | 19 | ♓ 0 | 9 | 33 | −1 | 46 |
| *Julii.* | 2 | 17 | 19 | 38 | 9 | 21 | 38 | 8 | 22 | 51 | ♈14 | 57 | 41 | ♈14 | 54 | 1 | −3 | 40 |
| | 6 | 20 | 58 | 32 | 9 | 25 | 9 | 10 | 16 | 58 | ♊12 | 18 | 24 | ♊12 | 13 | 55 | −4 | 29 |
| | 14 | 2 | 37 | 31 | 10 | 1 | 18 | 1 | 10 | 37 | ♍13 | 50 | 26 | ♍13 | 50 | 31 | +0 | 5 |
| : : | 15 | 3 | 18 | 32 | 10 | 2 | 10 | 1 | 21 | 53 | ♍26 | 7 | 28 | ♍26 | 8 | 20 | +0 | 52 |
| : : | 17 | 4 | 41 | 54 | 10 | 3 | 55 | 2 | 14 | 32 | ♎20 | 32 | 35 | ♎20 | 35 | 3 | +2 | 28 |
| | 20 | 7 | 1 | 59 | 10 | 6 | 33 | 3 | 19 | 47 | ♍28 | 4 | 48 | ♍28 | 6 | 53 | +2 | 5 |
| | 23 | 9 | 46 | 0 | 10 | 9 | 12 | 4 | 27 | 44 | ♑ 8 | 49 | 1 | ♑ 8 | 47 | 36 | −1 | 25 |
| | 24 | 10 | 42 | 43 | 10 | 10 | 5 | 5 | 11 | 9 | ♑23 | 20 | 20 | ♑23 | 19 | 23 | −0 | 57 |
| | 25 | 11 | 38 | 39 | 10 | 10 | 58 | 5 | 24 | 52 | ♒ 8 | 17 | 45 | ♒ 8 | 14 | 44 | −3 | 1 |
| | 28 | 14 | 21 | 35 | 10 | 13 | 38 | 7 | 7 | 18 | ♓24 | 27 | 48 | ♓24 | 26 | 26 | −1 | 22 |
| | 30 | 16 | 7 | 46 | 10 | 15 | 24 | 8 | 5 | 44 | ♈24 | 52 | 16 | ♈24 | 50 | 1 | −2 | 15 |
| *Julii.* | 31 | 17 | 2 | 20 | 10 | 16 | 17 | 8 | 19 | 42 | ♉ 9 | 37 | 46 | ♉ 9 | 34 | 50 | −2 | 56 |
| *Aug.* | 1 | 17 | 58 | 4 | 10 | 17 | 10 | 9 | 3 | 24 | ♉24 | 2 | 38 | ♉23 | 58 | 55 | −3 | 43 |
| | 2 | 18 | 54 | 18 | 10 | 18 | 4 | 9 | 16 | 45 | ♊ 8 | 6 | 56 | ♊ 8 | 2 | 53 | −4 | 3 |
| | 3 | 19 | 50 | 5 | 10 | 18 | 57 | 9 | 29 | 44 | ♊21 | 52 | 10 | ♊21 | 48 | 14 | −3 | 56 |
| | 5 | 21 | 35 | 57 | 10 | 20 | 43 | 10 | 24 | 34 | ♋18 | 31 | 36 | ♋18 | 30 | 4 | −1 | 32 |
| | 18 | 6 | 37 | 1 | 11 | 1 | 20 | 3 | 12 | 27 | ♐18 | 41 | 24 | ♐18 | 43 | 2 | +1 | 38 |
| | 19 | 7 | 31 | 27 | 11 | 2 | 14 | 3 | 25 | 9 | ♑ 2 | 10 | 33 | ♑ 2 | 10 | 22 | −0 | 11 |
| | 20 | 8 | 26 | 46 | 11 | 3 | 8 | 4 | 8 | 15 | ♑16 | 9 | 7 | ♑16 | 7 | 23 | −1 | 44 |
| | 22 | 10 | 17 | 11 | 11 | 4 | 55 | 5 | 5 | 37 | ♒15 | 41 | 46 | ♒15 | 37 | 49 | −3 | 57 |
| | 25 | 13 | 2 | 6 | 11 | 7 | 36 | 6 | 18 | 41 | ♈ 2 | 43 | 17 | ♈ 2 | 39 | 59 | −3 | 18 |
| | 26 | 13 | 57 | 7 | 11 | 8 | 30 | 7 | 3 | 11 | ♈18 | 25 | 45 | ♈18 | 22 | 57 | −2 | 48 |
| | 27 | 14 | 53 | 17 | 11 | 9 | 24 | 7 | 17 | 32 | ♉ 3 | 50 | 55 | ♉ 3 | 48 | 37 | −2 | 18 |
| | 28 | 15 | 50 | 34 | 11 | 10 | 18 | 8 | 1 | 40 | ♉18 | 52 | 41 | ♉18 | 49 | 55 | −2 | 46 |
| *Aug.* | 29 | 16 | 48 | 15 | 11 | 11 | 12 | 8 | 15 | 27 | ♊ 3 | 27 | 0 | ♊ 3 | 23 | 37 | −3 | 23 |
| *Sept.* | 1 | 19 | 33 | 4 | 11 | 13 | 53 | 9 | 24 | 22 | ♋14 | 32 | 17 | ♋14 | 29 | 25 | −2 | 52 |
| | 2 | 20 | 22 | 35 | 11 | 14 | 47 | 10 | 6 | 30 | ♋27 | 31 | 54 | ♋27 | 30 | 13 | −1 | 41 |
| | 4 | 21 | 53 | 21 | 11 | 16 | 34 | 10 | 29 | 45 | ♌22 | 50 | 7 | ♌22 | 51 | 23 | +1 | 16 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXII. Currente.

| Transitus Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | H. | D. | ′ | ″ | S. | o | ′ | S. | o | ′ | ☌ | ′ | ″ | o | ′ | ″ | ′ | ″ |
| Sept. | 15 | 5 | 22 | 4 | 11 | 25 | 33 | 2 | 22 | 57 | ♐ 26 | 47 | 14 | ♐ 26 | 50 | 53 | +3 | 39 |
| | 16 | 6 | 15 | 17 | 11 | 26 | 27 | 3 | 5 | 34 | ♑ 10 | 9 | 0 | ♑ 10 | 10 | 47 | +1 | 47 |
| | 18 | 8 | 2 | 10 | 11 | 28 | 16 | 4 | 2 | 3 | ♒ 8 | 18 | 16 | ♒ 8 | 16 | 24 | −1 | 52 |
| | 19 | 8 | 55 | 22 | 11 | 29 | 10 | 4 | 15 | 53 | ♒ 23 | 10 | 24 | ♒ 23 | 6 | 15 | −4 | 9 |
| | 21 | 10 | 42 | 25 | 0 | 0 | 59 | 5 | 14 | 28 | ♓ 14 | 14 | 18 | ♓ 14 | 8 | 10 | −6 | 8 |
| | 22 | 11 | 37 | 28 | 0 | 1 | 54 | 5 | 29 | 2 | ♈ 10 | 8 | 41 | ♈ 10 | 3 | 5 | −5 | 36 |
| | 24 | 13 | 32 | 58 | 0 | 3 | 43 | 6 | 28 | 4 | ♉ 11 | 43 | 38 | ♉ 11 | 39 | 43 | −3 | 55 |
| | 25 | 14 | 35 | 6 | 0 | 4 | 38 | 7 | 12 | 19 | ♉ 27 | 4 | 0 | ♉ 26 | 59 | 46 | −4 | 14 |
| | 28 | 17 | 27 | 31 | 0 | 7 | 22 | 8 | 22 | 42 | ♋ 9 | 56 | 45 | ♋ 9 | 52 | 27 | −4 | 18 |
| | 29 | 18 | 18 | 57 | 0 | 8 | 17 | 9 | 5 | 16 | ♋ 23 | 16 | 11 | ♋ 23 | 12 | 10 | −4 | 1 |
| Sept. | 30 | 19 | 6 | 57 | 0 | 9 | 12 | 9 | 17 | 26 | ♌ 6 | 13 | 9 | ♌ 6 | 9 | 54 | −3 | 15 |
| Octo. | 1 | 19 | 51 | 56 | 0 | 10 | 6 | 9 | 29 | 14 | ♌ 18 | 51 | 41 | ♌ 18 | 50 | 31 | −1 | 10 |
| | 3 | 21 | 16 | 15 | 0 | 11 | 55 | 10 | 21 | 58 | ♍ 13 | 36 | 35 | ♍ 13 | 38 | 10 | +1 | 35 |
| | 14 | 5 | 1 | 59 | 0 | 21 | 2 | 2 | 16 | 19 | ♑ 18 | 57 | 45 | ♑ 19 | 0 | 46 | +3 | 1 |
| | 15 | 5 | 43 | 40 | 0 | 21 | 57 | 2 | 29 | 14 | ♒ 2 | 41 | 1 | ♒ 2 | 42 | 25 | +1 | 24 |
| | 17 | 7 | 35 | 52 | 0 | 23 | 47 | 3 | 26 | 14 | ♓ 1 | 24 | 5 | ♓ 1 | 21 | 38 | −2 | 27 |
| | 18 | 8 | 27 | 22 | 0 | 24 | 42 | 4 | 10 | 15 | ♓ 16 | 25 | 8 | ♓ 16 | 21 | 17 | −3 | 51 |
| | 19 | 9 | 20 | 13 | 0 | 25 | 38 | 4 | 24 | 30 | ♈ 1 | 49 | 43 | ♈ 1 | 44 | 18 | −5 | 25 |
| | 20 | 10 | 15 | 7 | 0 | 26 | 33 | 5 | 8 | 55 | ♈ 17 | 29 | 18 | ♈ 17 | 23 | 47 | −5 | 31 |
| | 21 | 11 | 12 | 35 | 0 | 27 | 28 | 5 | 23 | 23 | ♉ 3 | 14 | 46 | ♉ 3 | 9 | 45 | −5 | 1 |
| | 24 | 14 | 16 | 51 | 1 | 0 | 15 | 7 | 5 | 46 | ♊ 19 | 19 | 10 | ♊ 19 | 15 | 28 | −3 | 42 |
| | 25 | 15 | 15 | 13 | 1 | 1 | 11 | 7 | 19 | 13 | ♋ 3 | 47 | 45 | ♋ 3 | 44 | 6 | −3 | 39 |
| | 29 | 18 | 32 | 2 | 1 | 4 | 52 | 9 | 8 | 57 | ♌ 26 | 55 | 10 | ♌ 26 | 52 | 26 | −2 | 44 |
| Octo. | 30 | 19 | 14 | 17 | 1 | 5 | 47 | 9 | 20 | 32 | ♍ 9 | 21 | 55 | ♍ 9 | 19 | 36 | −2 | 19 |
| Nov. | 10 | 2 | 58 | 55 | 1 | 15 | 2 | 1 | 14 | 47 | ♑ 14 | 54 | 17 | ♑ 14 | 54 | 55 | +0 | 38 |
| | 13 | 5 | 30 | 32 | 1 | 17 | 49 | 2 | 23 | 28 | ♒ 26 | 18 | 6 | ♒ 26 | 19 | 16 | +1 | 10 |
| | 15 | 7 | 10 | 10 | 1 | 19 | 40 | 3 | 20 | 51 | ♓ 25 | 23 | 36 | ♓ 25 | 25 | 26 | +1 | 50 |
| | 19 | 10 | 53 | 4 | 1 | 23 | 24 | 5 | 17 | 18 | ♉ 26 | 13 | 28 | ♉ 26 | 11 | 15 | −2 | 13 |
| Cent. | 20 | 11 | 55 | 21 | 1 | 24 | 20 | 6 | 1 | 13 | ♊ 11 | 25 | 10 | ♊ 11 | 22 | 55 | −2 | 15 |
| | 22 | 13 | 54 | 50 | 1 | 26 | 13 | 6 | 28 | 7 | ♋ 10 | 48 | 15 | ♋ 10 | 45 | 10 | −3 | 5 |
| | 23 | 14 | 48 | 56 | 1 | 27 | 9 | 7 | 11 | 0 | ♋ 24 | 50 | 14 | ♋ 24 | 49 | 46 | −0 | 28 |
| | 24 | 15 | 39 | 3 | 1 | 28 | 5 | 7 | 23 | 32 | ♌ 8 | 24 | 40 | ♌ 8 | 22 | 54 | −1 | 46 |
| | 25 | 16 | 25 | 37 | 1 | 29 | 0 | 8 | 5 | 43 | ♌ 21 | 33 | 19 | ♌ 21 | 31 | 5 | −2 | 14 |
| | 27 | 17 | 51 | 36 | 2 | 0 | 52 | 8 | 29 | 15 | ♍ 16 | 49 | 46 | ♍ 16 | 48 | 2 | −1 | 44 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

## Anno JULIANO MDCCXXXII. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o | ′ | S. | o | ′ | o | ′ | ″ | o | ′ | ″ | ′ | ″ |
| Nov. | 28 | 18 | 33 | 1 | 2 | 1 | 47 | 9 | 10 | 42 | ♍29 | 8 | 14 | ♍29 | 6 | 30 | —1 | 44 |
| | 29 | 19 | 14 | 37 | 2 | 2 | 43 | 9 | 22 | 2 | ♎11 | 20 | 16 | ♎11 | 19 | 15 | —1 | 1 |
| Nov. | 30 | 19 | 57 | 18 | 2 | 3 | 39 | 10 | 3 | 19 | ♎23 | 31 | 58 | ♎23 | 31 | 28 | —0 | 30 |
| Dec. | 9 | 2 | 38 | 5 | 2 | 11 | 6 | 1 | 8 | 21 | ♒ 7 | 56 | 30 | ♒ 7 | 55 | 31 | —0 | 59 |
| | 10 | 3 | 28 | 27 | 2 | 12 | 2 | 1 | 21 | 23 | ♒22 | 3 | 30 | ♒22 | 3 | 23 | —0 | 7 |
| | 11 | 4 | 17 | 56 | 2 | 12 | 58 | 2 | 4 | 42 | ♓ 6 | 21 | 34 | ♓ 6 | 21 | 23 | —0 | 11 |
| | 13 | 5 | 57 | 15 | 2 | 14 | 50 | 3 | 2 | 1 | ♈ 5 | 24 | 9 | ♈ 5 | 22 | 31 | —1 | 38 |
| | 17 | 9 | 38 | 18 | 2 | 18 | 35 | 4 | 27 | 27 | ♊ 4 | 31 | 1 | ♊ 4 | 27 | 50 | —3 | 11 |
| | 22 | 14 | 16 | 9 | 2 | 23 | 17 | 7 | 2 | 5 | ♌15 | 24 | 29 | ♌15 | 23 | 45 | —0 | 44 |
| | 29 | 19 | 20 | 53 | 2 | 29 | 47 | 9 | 23 | 7 | ♍12 | 57 | 30 | ♍12 | 56 | 44 | —0 | 46 |

## Anno JULIANO MDCCXXXIII. Currente.

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan. | 8 | 3 | 4 | 13 | 3 | 8 | 11 | 1 | 15 | 51 | ♓16 | 10 | 17 | ♓16 | 10 | 4 | —0 | 13 |
| | 9 | 3 | 54 | 48 | 3 | 9 | 7 | 1 | 29 | 36 | ♈ 0 | 57 | 6 | ♈ 0 | 56 | 52 | —0 | 14 |
| | 10 | 4 | 46 | 13 | 3 | 10 | 3 | 2 | 13 | 28 | ♈15 | 42 | 31 | ♈15 | 41 | 40 | —0 | 51 |
| | 11 | 5 | 39 | 9 | 3 | 10 | 59 | 2 | 27 | 22 | ♉ 0 | 23 | 23 | ♉ 0 | 22 | 6 | —1 | 17 |
| | 12 | 6 | 34 | 2 | 3 | 11 | 55 | 3 | 11 | 12 | ♉14 | 59 | 0 | ♉14 | 57 | 0 | —2 | 0 |
| | 14 | 8 | 28 | 24 | 3 | 13 | 47 | 4 | 8 | 23 | ♊13 | 49 | 34 | ♊13 | 47 | 8 | —2 | 26 |
| | 15 | 9 | 25 | 50 | 3 | 14 | 43 | 4 | 21 | 37 | ♊28 | 2 | 16 | ♊28 | 0 | 27 | —1 | 49 |
| | 16 | 10 | 23 | 55 | 3 | 15 | 39 | 5 | 4 | 32 | ♋12 | 4 | 38 | ♋12 | 4 | 23 | —0 | 15 |
| Jan. | 17 | 11 | 14 | 46 | 3 | 16 | 35 | 5 | 17 | 5 | ♋25 | 52 | 42 | ♋25 | 52 | 41 | —0 | 1 |
| Feb. | 5 | 1 | 48 | 20 | 4 | 3 | 15 | 0 | 26 | 33 | ♓25 | 5 | 30 | ♓25 | 5 | 41 | +0 | 11 |
| | 9 | 5 | 26 | 32 | 4 | 6 | 57 | 2 | 22 | 45 | ♉25 | 8 | 47 | ♉25 | 7 | 0 | —1 | 47 |
| | 10 | 6 | 24 | 0 | 4 | 7 | 53 | 3 | 6 | 27 | ♊ 9 | 33 | 42 | ♊ 9 | 31 | 13 | —2 | 29 |
| | 11 | 7 | 20 | 58 | 4 | 8 | 48 | 3 | 19 | 50 | ♊23 | 40 | 47 | ♊23 | 39 | 23 | —1 | 24 |
| | 12 | 8 | 16 | 31 | 4 | 9 | 44 | 4 | 2 | 53 | ♋ 7 | 35 | 18 | ♋ 7 | 32 | 32 | —2 | 46 |
| | 13 | 9 | 9 | 30 | 4 | 10 | 39 | 4 | 15 | 33 | ♋21 | 13 | 7 | ♋21 | 11 | 34 | —1 | 33 |
| | 14 | 9 | 59 | 40 | 4 | 11 | 34 | 4 | 27 | 52 | ♌ 4 | 37 | 46 | ♌ 4 | 36 | 56 | —0 | 50 |
| Feb. | 28 | 20 | 57 | 10 | 4 | 24 | 22 | 10 | 11 | 33 | ♒ 2 | 43 | 8 | ♒ 2 | 41 | 24 | —1 | 44 |
| Mart. | 10 | 5 | 15 | 26 | 5 | 2 | 36 | 2 | 17 | 52 | ♊19 | 10 | 33 | ♊19 | 9 | 33 | —1 | 0 |
| | 14 | 8 | 45 | 3 | 5 | 6 | 14 | 4 | 9 | 9 | ♌13 | 44 | 21 | ♌13 | 43 | 14 | —1 | 7 |

# *LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

Anno JULIANO MDCCXXXIII. Currente.

| *Transitûs Limbi Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Distantia ☾ à ☉* | | | *Longitudo Centri Lunæ Observata.* | | | *Longitudo Centri Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | o | ′ | S. | o | ′ | o | ′ | ″ | o | ′ | ″ | ′ | ″ |
| *Mart.* | 15 | 9 | 30 | 22 | 5 | 7 | 8 | 4 | 21 | 0 | ♌26 | 39 | 4 | ♌26 | 38 | 31 | —0 | 33 |
| | 17 | 10 | 56 | 18 | 5 | 8 | 56 | 5 | 13 | 52 | ♍21 | 53 | 30 | ♍21 | 53 | 4 | —0 | 26 |
| *Mart.* | 27 | 18 | 46 | 30 | 5 | 17 | 57 | 9 | 8 | 25 | ♈26 | 39 | 6 | ♈26 | 33 | 42 | —5 | 24 |
| *Apri.* | 6 | 3 | 2 | 34 | 5 | 26 | 3 | 1 | 14 | 54 | ♊12 | 57 | 18 | ♊12 | 58 | 51 | +1 | 33 |
| | 7 | 4 | 2 | 35 | 5 | 26 | 57 | 1 | 28 | 53 | ♊27 | 50 | 2 | ♊27 | 51 | 25 | +1 | 23 |
| | 11 | 7 | 28 | 48 | 6 | 0 | 32 | 3 | 20 | 27 | ♌22 | 37 | 48 | ♌22 | 37 | 59 | +0 | 11 |
| | 12 | 8 | 12 | 50 | 6 | 1 | 25 | 4 | 2 | 29 | ♍ 5 | 24 | 15 | ♍ 5 | 24 | 46 | +0 | 31 |
| | 13 | 8 | 55 | 25 | 6 | 2 | 19 | 4 | 13 | 52 | ♍17 | 56 | 48 | ♍17 | 57 | 45 | +0 | 57 |
| | 15 | 10 | 19 | 30 | 6 | 4 | 5 | 5 | 6 | 18 | ♎12 | 34 | 56 | ♎12 | 35 | 40 | +0 | 44 |
| *Cent.* | 17 | 11 | 47 | 54 | 6 | 5 | 52 | 5 | 28 | 17 | ♏ 6 | 58 | 50 | ♏ 6 | 56 | 42 | —2 | 8 |
| | 22 | 15 | 51 | 20 | 6 | 10 | 18 | 7 | 24 | 54 | ♑ 9 | 0 | 36 | ♑ 8 | 54 | 45 | —5 | 51 |
| | 23 | 16 | 41 | 12 | 6 | 11 | 12 | 8 | 6 | 59 | ♑21 | 58 | 34 | ♑21 | 52 | 19 | —6 | 15 |
| | 25 | 18 | 19 | 41 | 6 | 12 | 58 | 9 | 2 | 18 | ♒18 | 55 | 5 | ♒18 | 48 | 10 | —6 | 55 |
| | 26 | 19 | 8 | 56 | 6 | 13 | 51 | 9 | 15 | 34 | ♓ 3 | 0 | 57 | ♓ 2 | 53 | 5 | —7 | 52 |
| *Apri.* | 27 | 19 | 58 | 54 | 6 | 14 | 44 | 9 | 29 | 15 | ♓17 | 32 | 3 | ♓17 | 26 | 41 | —5 | 22 |
| *Maii.* | 5 | 2 | 45 | 35 | 6 | 20 | 58 | 1 | 9 | 36 | ♋ 5 | 36 | 20 | ♋ 5 | 38 | 45 | +2 | 25 |
| | 6 | 3 | 42 | 30 | 6 | 21 | 52 | 1 | 23 | 12 | ♋20 | 11 | 33 | ♋20 | 13 | 28 | +1 | 55 |
| | 13 | 9 | 0 | 33 | 6 | 28 | 1 | 4 | 17 | 39 | ♌20 | 43 | 47 | ♌20 | 45 | 36 | +1 | 49 |
| | 15 | 10 | 29 | 44 | 6 | 29 | 47 | 5 | 9 | 52 | ♍15 | 5 | 22 | ♍15 | 5 | 20 | —0 | 2 |
| *Cent.* | 16 | 11 | 18 | 0 | 7 | 0 | 39 | 5 | 20 | 59 | ♍27 | 21 | 38 | ♍27 | 20 | 33 | —1 | 5 |
| | 20 | 14 | 38 | 32 | 7 | 4 | 11 | 7 | 6 | 58 | ♎17 | 57 | 2 | ♎17 | 51 | 32 | —5 | 30 |
| | 21 | 15 | 28 | 0 | 7 | 5 | 3 | 7 | 19 | 6 | ♏ 1 | 7 | 0 | ♏ 1 | 0 | 27 | —6 | 33 |
| | 22 | 16 | 16 | 42 | 7 | 5 | 56 | 8 | 1 | 35 | ♑14 | 32 | 20 | ♑14 | 25 | 36 | —6 | 44 |
| | 23 | 17 | 4 | 58 | 7 | 6 | 49 | 8 | 14 | 26 | ♑28 | 15 | 38 | ♑28 | 8 | 15 | —7 | 23 |
| *Maii.* | 27 | 20 | 27 | 53 | 7 | 10 | 20 | 10 | 9 | 20 | ♈26 | 26 | 2 | ♈26 | 17 | 42 | —8 | 20 |
| *Junii.* | 3 | 2 | 22 | 38 | 7 | 15 | 38 | 1 | 3 | 54 | ♋27 | 36 | 50 | ♋27 | 38 | 44 | +1 | 54 |
| | 4 | 3 | 14 | 36 | 7 | 16 | 31 | 1 | 16 | 59 | ♌11 | 44 | 37 | ♌11 | 47 | 51 | +3 | 14 |
| | 6 | 4 | 48 | 33 | 7 | 18 | 16 | 2 | 12 | 1 | ♍ 8 | 38 | 3 | ♍ 8 | 40 | 30 | +2 | 27 |
| | 9 | 6 | 57 | 26 | 7 | 20 | 53 | 3 | 17 | 18 | ♎16 | 18 | 6 | ♎16 | 20 | 31 | +2 | 25 |
| | 13 | 10 | 0 | 30 | 7 | 24 | 23 | 5 | 2 | 33 | ♐ 5 | 16 | 47 | ♐ 5 | 16 | 46 | —0 | 1 |
| | 14 | 10 | 50 | 21 | 7 | 25 | 15 | 5 | 13 | 59 | ♐17 | 49 | 30 | ♐17 | 48 | 5 | —1 | 25 |
| *Cent.* | 15 | 11 | 42 | 16 | 7 | 26 | 8 | 5 | 25 | 34 | ♑ 0 | 35 | 32 | ♑ 0 | 33 | 5 | —2 | 27 |
| | 20 | 15 | 21 | 29 | 8 | 0 | 31 | 7 | 27 | 18 | ♓ 8 | 1 | 34 | ♓ 7 | 56 | 22 | —5 | 12 |

# *LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

Anno JULIANO MDCCXXXIII. Currente.

| *Transitûs Limbi Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Distantia ☾ à ☉* | | | *Longitudo Centri Lunæ Observata.* | | | *Longitudo Centri Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | *s.* | ° | ′ | *s.* | ° | ′ | ° | ′ | ″ | ° | ′ | ″ | ′ | ″ |
| *Junii.* | 21 | 16 | 40 | 1 | 8 | 1 | 23 | 8 | 10 | 35 | ♓22 | 11 | 1 | ♓22 | 6 | 3 | −4 | 58 |
| | 22 | 17 | 29 | 41 | 8 | 2 | 16 | 8 | 24 | 10 | ♈ 6 | 34 | 3 | ♈ 6 | 27 | 57 | −6 | 6 |
| | 23 | 18 | 21 | 19 | 8 | 3 | 9 | 9 | 8 | 1 | ♈21 | 9 | 7 | ♈21 | 2 | 0 | −7 | 7 |
| | 24 | 19 | 15 | 32 | 8 | 4 | 1 | 9 | 22 | 3 | ♉ 5 | 54 | 36 | ♉ 5 | 47 | 43 | −6 | 53 |
| *Junii.* | 27 | 22 | 12 | 48 | 8 | 6 | 40 | 11 | 4 | 20 | ♊20 | 54 | 12 | ♊20 | 51 | 8 | −3 | 4 |
| *Julii.* | 6 | 4 | 52 | 42 | 8 | 13 | 41 | 2 | 16 | 6 | ♑11 | 20 | 48 | ♑11 | 23 | 40 | +2 | 52 |
| | 7 | 5 | 36 | 8 | 8 | 14 | 34 | 2 | 27 | 40 | ♑22 | 41 | 53 | ♑23 | 43 | 44 | +1 | 51 |
| | 10 | 7 | 53 | 33 | 8 | 17 | 11 | 4 | 2 | 2 | ♐ 0 | 21 | 57 | ♐ 0 | 23 | 28 | +1 | 31 |
| | 11 | 8 | 42 | 40 | 8 | 18 | 4 | 4 | 13 | 34 | ♐12 | 47 | 59 | ♐12 | 48 | 54 | +0 | 55 |
| | 12 | 9 | 33 | 7 | 8 | 18 | 57 | 4 | 25 | 15 | ♐25 | 28 | 10 | ♐25 | 28 | 21 | +0 | 11 |
| | 13 | 10 | 24 | 22 | 8 | 19 | 50 | 5 | 7 | 6 | ♍ 8 | 26 | 39 | ♍ 8 | 25 | 5 | −1 | 34 |
| | 14 | 11 | 15 | 38 | 8 | 20 | 42 | 5 | 19 | 11 | ♍21 | 43 | 31 | ♍21 | 40 | 53 | −2 | 38 |
| | 18 | 14 | 37 | 35 | 8 | 24 | 13 | 7 | 10 | 16 | ♓17 | 43 | 8 | ♓17 | 39 | 36 | −3 | 32 |
| | 20 | 16 | 18 | 38 | 8 | 25 | 59 | 8 | 7 | 27 | ♈16 | 46 | 40 | ♈16 | 43 | 12 | −3 | 28 |
| | 21 | 17 | 11 | 44 | 8 | 26 | 52 | 8 | 21 | 21 | ♉ 1 | 25 | 11 | ♉ 1 | 21 | 21 | −3 | 50 |
| | 22 | 18 | 7 | 4 | 8 | 27 | 45 | 9 | 5 | 20 | ♉16 | 5 | 35 | ♉16 | 1 | 5 | −4 | 30 |
| | 23 | 19 | 4 | 31 | 8 | 28 | 38 | 9 | 19 | 19 | ♊ 0 | 46 | 55 | ♊ 0 | 42 | 0 | −4 | 45 |
| | 24 | 20 | 3 | 14 | 8 | 29 | 31 | 10 | 3 | 13 | ♊15 | 26 | 47 | ♊15 | 22 | 30 | −4 | 17 |
| *Julii.* | 25 | 21 | 1 | 53 | 9 | 0 | 25 | 10 | 16 | 55 | ♋ 0 | 3 | 10 | ♋ 0 | 0 | 12 | −2 | 58 |
| *Aug.* | 1 | 2 | 3 | 13 | 9 | 5 | 43 | 1 | 3 | 0 | ♍23 | 17 | 45 | ♍23 | 18 | 20 | +0 | 35 |
| | 6 | 5 | 47 | 28 | 9 | 10 | 7 | 3 | 0 | 42 | ♎25 | 19 | 55 | ♎25 | 21 | 28 | +1 | 33 |
| | 7 | 6 | 34 | 23 | 9 | 11 | 0 | 3 | 12 | 14 | ♐ 7 | 35 | 47 | ♐ 7 | 36 | 52 | +1 | 5 |
| | 9 | 8 | 14 | 14 | 9 | 12 | 47 | 4 | 5 | 45 | ♍ 2 | 46 | 42 | ♍ 2 | 45 | 53 | −0 | 49 |
| | 11 | 9 | 56 | 13 | 9 | 14 | 33 | 5 | 0 | 11 | ♍29 | 18 | 19 | ♍29 | 15 | 23 | −2 | 56 |
| | 12 | 10 | 47 | 3 | 9 | 15 | 26 | 5 | 12 | 49 | ♏13 | 10 | 36 | ♏13 | 6 | 23 | −4 | 13 |
| | 13 | 11 | 38 | 42 | 9 | 16 | 19 | 5 | 25 | 47 | ♏27 | 25 | 35 | ♏27 | 21 | 20 | −4 | 15 |
| | 16 | 14 | 13 | 36 | 9 | 19 | 0 | 7 | 6 | 23 | ♈11 | 44 | 16 | ♈11 | 41 | 21 | −2 | 55 |
| | 18 | 16 | 2 | 53 | 9 | 20 | 47 | 8 | 4 | 25 | ♉11 | 36 | 13 | ♉11 | 34 | 18 | −1 | 55 |
| | 19 | 17 | 0 | 10 | 9 | 21 | 40 | 8 | 18 | 29 | ♉26 | 24 | 25 | ♉26 | 22 | 8 | −2 | 17 |
| | 23 | 20 | 47 | 30 | 9 | 25 | 15 | 10 | 12 | 53 | ♋23 | 56 | 15 | ♋23 | 55 | 17 | −0 | 58 |
| *Aug.* | 25 | 22 | 28 | 0 | 9 | 27 | 2 | 11 | 8 | 12 | ♌21 | 27 | 54 | ♌21 | 30 | 5 | +2 | 11 |
| *Sept.* | 1 | 2 | 54 | 24 | 10 | 2 | 23 | 1 | 17 | 57 | ♎ 8 | 17 | 46 | ♎ 8 | 19 | 27 | +1 | 41 |
| | 6 | 6 | 55 | 40 | 10 | 6 | 52 | 3 | 15 | 38 | ♍10 | 0 | 13 | ♍10 | 0 | 12 | −0 | 1 |
| | 7 | 7 | 44 | 36 | 10 | 7 | 46 | 3 | 27 | 48 | ♍23 | 3 | 7 | ♍23 | 1 | 22 | −1 | 45 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXIII. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | ° | ′ | S. | ° | ′ | ° | ′ | ″ | ° | ′ | ″ | ′ | ″ |
| *Sept.* | 8 | 8 | 34 | 44 | 10 | 8 | 40 | 4 | 10 | 18 | ♒ 6 | 31 | 58 | ♒ 6 | 28 | 21 | −3 | 37 |
| | 9 | 9 | 24 | 57 | 10 | 9 | 34 | 4 | 23 | 8 | ♒20 | 28 | 42 | ♒20 | 23 | 50 | −4 | 52 |
| | 10 | 10 | 15 | 28 | 10 | 10 | 28 | 5 | 6 | 21 | ♓ 4 | 53 | 9 | ♓ 5 | 48 | 14 | −4 | 55 |
| | 14 | 13 | 53 | 12 | 10 | 14 | 5 | 7 | 2 | 10 | ♉ 5 | 43 | 0 | ♉ 5 | 40 | 31 | −2 | 29 |
| | 17 | 16 | 51 | 5 | 10 | 16 | 48 | 8 | 14 | 49 | ♊21 | 1 | 48 | ♊21 | 0 | 30 | −1 | 18 |
| | 18 | 17 | 48 | 55 | 10 | 17 | 43 | 8 | 28 | 36 | ♋ 5 | 33 | 20 | ♋ 5 | 31 | 34 | −1 | 46 |
| | 19 | 18 | 44 | 5 | 10 | 18 | 37 | 9 | 12 | 1 | ♋19 | 44 | 54 | ♋19 | 43 | 1 | −1 | 53 |
| | 21 | 20 | 25 | 14 | 10 | 20 | 26 | 10 | 7 | 42 | ♌17 | 11 | 13 | ♌17 | 12 | 32 | +1 | 19 |
| *Sept.*::*Octo.* | 29 | 1 | 35 | 55 | 10 | 26 | 46 | 0 | 28 | 16 | ♍16 | 1 | 58 | ♍16 | 1 | 0 | −0 | 58 |
| | 1 | 3 | 10 | 10 | 10 | 28 | 38 | 1 | 20 | 31 | ♎10 | 20 | 54 | ♎10 | 20 | 46 | −0 | 8 |
| | 4 | 5 | 35 | 54 | 11 | 1 | 19 | 2 | 25 | 15 | ♑17 | 34 | 42 | ♑17 | 34 | 45 | +0 | 3 |
| | 5 | 6 | 24 | 34 | 11 | 2 | 13 | 3 | 7 | 22 | ♒ 0 | 31 | 18 | ♒ 0 | 30 | 52 | −0 | 26 |
| | 7 | 8 | 2 | 13 | 11 | 4 | 3 | 4 | 2 | 45 | ♒27 | 43 | 25 | ♒27 | 39 | 35 | −3 | 50 |
| | 8 | 8 | 52 | 0 | 11 | 4 | 58 | 4 | 16 | 2 | ♓12 | 3 | 34 | ♓11 | 58 | 5 | −4 | 46 |
| | 9 | 9 | 43 | 23 | 11 | 5 | 53 | 4 | 29 | 44 | ♓26 | 54 | 55 | ♓26 | 49 | 0 | −5 | 55 |
| | 10 | 10 | 37 | 1 | 11 | 6 | 48 | 5 | 13 | 46 | ♈12 | 12 | 5 | ♈12 | 5 | 55 | −6 | 10 |
| | 14 | 14 | 38 | 42 | 11 | 10 | 29 | 7 | 11 | 38 | ♊14 | 52 | 53 | ♊14 | 50 | 56 | −1 | 57 |
| | 15 | 15 | 39 | 34 | 11 | 11 | 23 | 7 | 25 | 52 | ♋ 0 | 4 | 37 | ♋ 0 | 3 | 5 | −1 | 32 |
| | 16 | 16 | 37 | 38 | 11 | 12 | 20 | 8 | 9 | 46 | ♋14 | 50 | 24 | ♋14 | 48 | 57 | −1 | 27 |
| | 18 | 18 | 22 | 45 | 11 | 14 | 10 | 9 | 6 | 17 | ♌12 | 59 | 47 | ♌12 | 58 | 14 | −1 | 33 |
| | 19 | 19 | 10 | 20 | 11 | 15 | 5 | 9 | 18 | 54 | ♌26 | 27 | 21 | ♌26 | 26 | 3 | −1 | 18 |
| | 22 | 21 | 22 | 37 | 11 | 17 | 50 | 10 | 24 | 27 | ♎ 4 | 58 | 51 | ♎ 4 | 59 | 15 | +0 | 24 |
| | 30 | 2 | 43 | 6 | 11 | 24 | 16 | 1 | 11 | 58 | ♑ 0 | 43 | 34 | ♑ 0 | 43 | 9 | −0 | 25 |
| *Octo.* | 31 | 3 | 31 | 23 | 11 | 25 | 12 | 1 | 23 | 23 | ♑13 | 8 | 59 | ♑13 | 9 | 10 | +0 | 11 |
| *Nov.* | 4 | 6 | 41 | 27 | 11 | 28 | 53 | 3 | 12 | 16 | ♓ 5 | 32 | 28 | ♓ 5 | 31 | 59 | +0 | 29 |
| | 6 | 8 | 20 | 49 | 0 | 0 | 44 | 4 | 2 | 8 | ♈ 4 | 16 | 15 | ♈ 4 | 12 | 35 | −3 | 40 |
| | 7 | 9 | 14 | 18 | 0 | 1 | 40 | 4 | 23 | 9 | ♈19 | 21 | 16 | ♈19 | 17 | 13 | −4 | 3 |
| | 8 | 10 | 11 | 15 | 0 | 2 | 36 | 5 | 7 | 30 | ♉ 4 | 51 | 23 | ♉ 4 | 47 | 38 | −3 | 45 |
| | 12 | 14 | 22 | 40 | 0 | 6 | 21 | 7 | 5 | 34 | ♋ 7 | 55 | 45 | ♋ 7 | 54 | 59 | −0 | 46 |
| | 17 | 18 | 37 | 40 | 0 | 10 | 59 | 9 | 11 | 9 | ♍18 | 11 | 40 | ♍18 | 9 | 13 | −2 | 27 |
| *Nov.* | 20 | 20 | 48 | 3 | 0 | 13 | 46 | 10 | 15 | 56 | ♎25 | 41 | 50 | ♎25 | 41 | 22 | −0 | 28 |
| *Dec.* | 1 | 4 | 37 | 31 | 0 | 23 | 4 | 2 | 9 | 35 | ♑ 0 | 46 | 22 | ♑ 0 | 47 | 33 | +1 | 11 |
| | 2 | 5 | 24 | 18 | 0 | 23 | 59 | 2 | 22 | 16 | ♓14 | 20 | 1 | ♓14 | 21 | 2 | +1 | 1 |
| | 3 | 6 | 12 | 13 | 0 | 24 | 55 | 3 | 5 | 23 | ♓28 | 14 | 27 | ♓28 | 15 | 25 | +0 | 58 |
| | 4 | 7 | 2 | 14 | 0 | 25 | 51 | 3 | 18 | 53 | ♈12 | 33 | 45 | ♈12 | 33 | 41 | −0 | 4 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

## Anno JULIANO MDCCXXXIII. Currente.

| Transitus Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S. | ° | ′ | S. | ° | ′ | ° | ′ | ″ | ☌ | ′ | ″ | ′ | ″ |
| Dec. | 6 | 8 | 51 | 56 | 0 | 27 | 44 | 4 | 16 | 57 | ♉12 | 27 | 16 | ♉12 | 25 | 36 | —1 | 40 |
| | 7 | 9 | 52 | 7 | 0 | 28 | 40 | 5 | 1 | 21 | ♉27 | 56 | 45 | ♉27 | 55 | 17 | —1 | 28 |
| | 8 | 10 | 54 | 51 | 0 | 29 | 36 | 5 | 15 | 50 | ♊13 | 39 | 29 | ♊13 | 38 | 17 | —1 | 12 |
| | 12 | 14 | 54 | 16 | 1 | 3 | 22 | 7 | 11 | 58 | ♌14 | 58 | 17 | ♌14 | 58 | 55 | +0 | 38 |
| | 14 | 16 | 31 | 56 | 1 | 5 | 14 | 8 | 7 | 49 | ♍12 | 52 | 57 | ♍12 | 51 | 17 | —1 | 40 |
| | 15 | 17 | 17 | 13 | 1 | 6 | 10 | 8 | 20 | 8 | ♍26 | 4 | 48 | ♍26 | 2 | 19 | —2 | 29 |
| | 16 | 18 | 1 | 20 | 1 | 7 | 6 | 9 | 2 | 7 | ♎ 8 | 52 | 36 | ♎ 8 | 49 | 3 | —3 | 33 |
| | 17 | 18 | 45 | 13 | 1 | 8 | 1 | 9 | 13 | 47 | ♎21 | 21 | 52 | ♎21 | 18 | 10 | —3 | 42 |
| | 18 | 19 | 29 | 31 | 1 | 8 | 57 | 9 | 25 | 56 | ♏ 3 | 37 | 50 | ♏ 3 | 34 | 13 | —3 | 37 |
| Dec. | 30 | 4 | 10 | 9 | 1 | 19 | 12 | 2 | 2 | 58 | ♐23 | 53 | 49 | ♐23 | 53 | 44 | —0 | 5 |

## Anno JULIANO MDCCXXXIV. Currente.

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan. | 1 | 5 | 48 | 48 | 1 | 21 | 4 | 2 | 29 | 30 | ♈22 | 0 | 48 | ♈22 | 1 | 30 | +0 | 42 |
| | 2 | 6 | 41 | 56 | 1 | 22 | 0 | 3 | 13 | 15 | ♉ 6 | 29 | 22 | ♉ 6 | 29 | 56 | +0 | 36 |
| | 4 | 8 | 37 | 35 | 1 | 23 | 53 | 4 | 11 | 24 | ♊ 6 | 20 | 2 | ♊ 6 | 19 | 23 | —0 | 39 |
| | 5 | 9 | 38 | 40 | 1 | 24 | 49 | 4 | 25 | 36 | ♊21 | 35 | 9 | ♊21 | 34 | 44 | —0 | 25 |
| | 6 | 10 | 39 | 53 | 1 | 25 | 45 | 5 | 9 | 44 | ♋ 6 | 56 | 7 | ♋ 6 | 56 | 20 | +0 | 13 |
| | 7 | 11 | 39 | 21 | 1 | 26 | 42 | 5 | 23 | 40 | ♋22 | 12 | 26 | ♋22 | 13 | 32 | +1 | 6 |
| | 11 | 15 | 8 | 42 | 2 | 0 | 26 | 7 | 16 | 17 | ♍20 | 0 | 5 | ♍19 | 59 | 26 | —0 | 39 |
| | 13 | 16 | 39 | 30 | 2 | 2 | 17 | 8 | 10 | 34 | ♎16 | 11 | 29 | ♎16 | 8 | 29 | —3 | 0 |
| | 17 | 19 | 42 | 55 | 2 | 6 | 0 | 9 | 26 | 37 | ♐ 5 | 24 | 42 | ♐ 5 | 20 | 30 | —4 | 12 |
| | 19 | 21 | 19 | 58 | 2 | 7 | 51 | 10 | 19 | 20 | ♑ 0 | 3 | 15 | ♑ 0 | 0 | 0 | —3 | 15 |
| Jan. | 31 | 6 | 30 | 1 | 2 | 18 | 3 | 8 | 3 | 33 | ♏ 1 | 13 | 3 | ♏ 1 | 13 | 7 | +0 | 4 |
| Feb. | 1 | 7 | 28 | 37 | 2 | 18 | 59 | 3 | 22 | 33 | ♎15 | 57 | 48 | ♎15 | 58 | 30 | +0 | 42 |
| Cent. | 3 | 9 | 27 | 9 | 2 | 20 | 50 | 4 | 20 | 16 | ♏15 | 36 | 30 | ♏15 | 37 | 54 | +1 | 24 |
| | 4 | 10 | 22 | 24 | 2 | 21 | 46 | 5 | 3 | 51 | ♐ 0 | 24 | 0 | ♐ 0 | 24 | 24 | +0 | 24 |
| Cent. | 5 | 11 | 17 | 16 | 2 | 22 | 42 | 5 | 17 | 10 | ♑15 | 1 | 17 | ♑15 | 2 | 17 | +1 | 0 |
| | 10 | 15 | 16 | 54 | 2 | 27 | 18 | 7 | 19 | 9 | ♒23 | 12 | 26 | ♒23 | 10 | 39 | —1 | 47 |
| | 11 | 16 | 2 | 42 | 2 | 28 | 13 | 8 | 0 | 49 | ♏ 5 | 48 | 53 | ♏ 5 | 45 | 32 | —3 | 21 |
| | 15 | 19 | 11 | 46 | 3 | 1 | 53 | 9 | 16 | 43 | ♐24 | 52 | 23 | ♐24 | 47 | 57 | —4 | 26 |
| | 18 | 21 | 37 | 32 | 3 | 4 | 39 | 10 | 21 | 50 | ♒ 2 | 54 | 38 | ♒ 2 | 50 | 51 | —3 | 47 |
| Feb. | 27 | 4 | 25 | 44 | 3 | 11 | 58 | 2 | 6 | 34 | ♉26 | 49 | 29 | ♉25 | 50 | 40 | +1 | 11 |
| Mart. | 1 | 6 | 22 | 26 | 3 | 13 | 49 | 3 | 4 | 28 | ♊26 | 15 | 35 | ♊26 | 15 | 10 | —0 | 25 |

# *LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

Anno JULIANO MDCCXXXIV. Currente.

| *Tranſitus Limbi Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Diſtantia ☾ à ☉* | | | *Longitudo Centri Lunæ Obſervata.* | | | *Longitudo Centri Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | H. | D. | ′ | ″ | S. | o | ′ | S. | o | ′ | ☌ | ′ | ″ | ☌ | ′ | ″ | ′ | ″ |
| *Mart.* | 2 | 7 | 21 | 12 | 3 | 14 | 44 | 3 | 18 | 17 | ♋ 10 | 52 | 1 | ♋ 10 | 50 | 52 | —1 | 9 |
| | 3 | 8 | 15 | 37 | 3 | 15 | 39 | 4 | 1 | 51 | ♋ 25 | 19 | 9 | ♋ 25 | 18 | 10 | —0 | 59 |
| | 13 | 16 | 16 | 17 | 3 | 24 | 44 | 8 | 2 | 50 | ♌ 7 | 36 | 18 | ♌ 7 | 31 | 12 | —5 | 6 |
| | 15 | 17 | 52 | 14 | 3 | 26 | 32 | 8 | 25 | 41 | ♍ 2 | 4 | 24 | ♍ 1 | 59 | 26 | —4 | 58 |
| | 18 | 20 | 15 | 31 | 3 | 29 | 15 | 10 | 1 | 9 | ♒ 10 | 4 | 36 | ♒ 10 | 0 | 23 | —4 | 13 |
| *Mar.* | 29 | 5 | 16 | 16 | 4 | 8 | 20 | 2 | 16 | 40 | ♋ 6 | 23 | 35 | ♋ 6 | 26 | 19 | +2 | 44 |
| *Apri.* | 1 | 7 | 56 | 28 | 4 | 11 | 0 | 3 | 27 | 11 | ♌ 19 | 22 | 5 | ♌ 19 | 21 | 59 | —0 | 6 |
| | 2 | 8 | 44 | 56 | 4 | 11 | 54 | 4 | 9 | 58 | ♏ 3 | 6 | 42 | ♏ 3 | 7 | 1 | +0 | 19 |
| | 3 | 9 | 31 | 36 | 4 | 12 | 47 | 4 | 22 | 23 | ♏ 16 | 34 | 57 | ♏ 16 | 35 | 25 | +0 | 28 |
| | 4 | 10 | 17 | 19 | 4 | 13 | 41 | 5 | 4 | 29 | ♏ 29 | 48 | 53 | ♏ 29 | 48 | 42 | —0 | 11 |
| | 5 | 11 | 2 | 34 | 4 | 14 | 35 | 5 | 16 | 17 | ♐ 12 | 47 | 49 | ♐ 12 | 47 | 19 | —0 | 30 |
| | 11 | 15 | 46 | 3 | 4 | 19 | 56 | 7 | 24 | 7 | ♑ 27 | 20 | 18 | ♑ 27 | 14 | 21 | —5 | 57 |
| | 12 | 16 | 43 | 43 | 4 | 20 | 50 | 8 | 5 | 28 | ♍ 9 | 35 | 59 | ♍ 9 | 30 | 13 | —5 | 46 |
| | 13 | 17 | 20 | 55 | 4 | 21 | 43 | 8 | 17 | 1 | ♍ 21 | 59 | 5 | ♍ 21 | 53 | 50 | —5 | 15 |
| | 14 | 18 | 7 | 42 | 4 | 22 | 36 | 8 | 28 | 48 | ♎ 4 | 35 | 40 | ♎ 4 | 29 | 59 | —5 | 41 |
| | 15 | 18 | 54 | 14 | 4 | 23 | 30 | 9 | 10 | 52 | ♎ 17 | 28 | 47 | ♎ 17 | 23 | 25 | —5 | 22 |
| | 17 | 20 | 28 | 36 | 4 | 25 | 16 | 10 | 6 | 4 | ♓ 14 | 25 | 46 | ♓ 14 | 21 | 0 | —4 | 46 |
| | 24 | 2 | 2 | 25 | 5 | 0 | 38 | 0 | 29 | 58 | ♊ 15 | 1 | 48 | ♊ 15 | 5 | 33 | +3 | 45 |
| | 28 | 5 | 53 | 19 | 5 | 4 | 11 | 2 | 26 | 12 | ♌ 14 | 59 | 24 | ♌ 15 | 1 | 47 | +2 | 23 |
| | 29 | 6 | 42 | 59 | 5 | 5 | 5 | 3 | 9 | 20 | ♌ 28 | 57 | 32 | ♌ 28 | 59 | 6 | +1 | 34 |
| *Apri.* | 30 | 7 | 30 | 14 | 5 | 5 | 58 | 3 | 22 | 5 | ♍ 12 | 32 | 10 | ♍ 12 | 32 | 50 | +0 | 40 |
| *Maii.* | 3 | 9 | 45 | 37 | 5 | 8 | 37 | 4 | 28 | 6 | ♐ 21 | 24 | 19 | ♐ 21 | 24 | 27 | +0 | 8 |
| | 4 | 10 | 30 | 58 | 5 | 9 | 30 | 5 | 9 | 31 | ♏ 3 | 55 | 58 | ♏ 3 | 55 | 12 | —0 | 46 |
| *Cent.* | 5 | 11 | 18 | 11 | 5 | 10 | 23 | 5 | 20 | 46 | ♏ 16 | 20 | 0 | ♏ 16 | 17 | 56 | —2 | 4 |
| *Cent.* | 6 | 12 | 5 | 12 | 5 | 11 | 16 | 6 | 1 | 53 | ♏ 28 | 37 | 53 | ♏ 28 | 34 | 19 | —3 | 34 |
| | 12 | 16 | 49 | 14 | 5 | 16 | 33 | 8 | 9 | 29 | ♒ 12 | 37 | 8 | ♒ 12 | 31 | 18 | —5 | 50 |
| | 13 | 17 | 34 | 50 | 5 | 17 | 26 | 8 | 21 | 30 | ♒ 25 | 28 | 12 | ♒ 15 | 21 | 59 | —6 | 13 |
| | 24 | 2 | 48 | 24 | 5 | 26 | 16 | 1 | 10 | 10 | ♋ 24 | 10 | 4 | ♋ 24 | 14 | 40 | +4 | 36 |
| *Maii.* | 26 | 4 | 37 | 26 | 5 | 28 | 2 | 2 | 7 | 55 | ♌ 23 | 50 | 36 | ♌ 23 | 55 | 29 | +4 | 53 |
| *Junii.* | 2 | 10 | 1 | 25 | 6 | 4 | 9 | 5 | 2 | 41 | ♏ 24 | 39 | 10 | ♏ 24 | 38 | 44 | —0 | 26 |
| *Cent.* | 4 | 11 | 37 | 38 | 6 | 5 | 55 | 5 | 24 | 48 | ♐ 19 | 4 | 53 | ♐ 19 | 2 | 7 | —2 | 46 |
| | 10 | 16 | 17 | 43 | 6 | 11 | 10 | 8 | 3 | 8 | ♓ 4 | 5 | 3 | ♓ 4 | 0 | 57 | —4 | 6 |
| | 11 | 17 | 3 | 12 | 6 | 12 | 2 | 8 | 15 | 27 | ♓ 17 | 15 | 22 | ♓ 17 | 10 | 20 | —5 | 2 |
| | 12 | 17 | 49 | 51 | 6 | 12 | 55 | 8 | 28 | 11 | ♈ 0 | 43 | 54 | ♈ 0 | 39 | 8 | —4 | 46 |

# *LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

Anno JULIANO MDCCXXXIV. Currente.

| *Transitûs Limbi Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Distantia ☾ à ☉* | | | *Longitudo Centri Lunæ Observata.* | | | *Longitudo Centri Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | H. | D. | ′ | ″ | S. | o | ′ | S. | o | ′ | o | ′ | ″ | o | ′ | ″ | ′ | ″ |
| *Junii.* | 25 | 4 | 55 | 4 | 6 | 23 | 28 | 2 | 15 | 12 | ♍ 29 | 44 | 46 | ♍ 29 | 46 | 42 | +1 | 56 |
| | 30 | 8 | 45 | 34 | 6 | 27 | 50 | 4 | 14 | 21 | ♐ 2 | 49 | 1 | ♐ 2 | 50 | 6 | +1 | 5 |
| *Julii.* | 1 | 9 | 33 | 11 | 6 | 28 | 43 | 4 | 25 | 32 | ♐ 15 | 0 | 52 | ♐ 15 | 1 | 8 | +0 | 16 |
| | 3 | 11 | 9 | 2 | 7 | 0 | 28 | 5 | 17 | 47 | ♑ 9 | 33 | 2 | ♑ 9 | 31 | 45 | −1 | 17 |
| | 7 | 14 | 16 | 43 | 7 | 3 | 58 | 7 | 3 | 28 | ♓ 0 | 7 | 30 | ♓ 0 | 3 | 47 | −3 | 43 |
| | 9 | 15 | 48 | 1 | 7 | 5 | 43 | 7 | 27 | 49 | ♓ 26 | 28 | 17 | ♓ 26 | 25 | 16 | −3 | 1 |
| | 13 | 19 | 12 | 23 | 7 | 9 | 14 | 9 | 21 | 2 | ♉ 22 | 38 | 50 | ♉ 22 | 33 | 59 | −4 | 51 |
| | 16 | 22 | 13 | 24 | 7 | 11 | 52 | 11 | 3 | 57 | ♋ 8 | 24 | 45 | ♋ 8 | 21 | 12 | −3 | 33 |
| | 27 | 6 | 41 | 4 | 7 | 20 | 43 | 3 | 13 | 52 | ♀ 28 | 23 | 21 | ♍ 28 | 22 | 40 | −0 | 41 |
| | 28 | 7 | 28 | 29 | 7 | 21 | 35 | 3 | 25 | 19 | ♐ 10 | 36 | 51 | ♐ 10 | 37 | 16 | +0 | 25 |
| | 29 | 8 | 16 | 20 | 7 | 22 | 28 | 4 | 6 | 39 | ♐ 22 | 50 | 12 | ♐ 22 | 50 | 24 | +0 | 12 |
| | 30 | 9 | 4 | 16 | 7 | 23 | 21 | 4 | 17 | 57 | ♑ 5 | 7 | 9 | ♑ 5 | 6 | 46 | −0 | 23 |
| *Julii.* | 31 | 9 | 51 | 58 | 7 | 24 | 14 | 4 | 29 | 15 | ♑ 17 | 30 | 50 | ♑ 17 | 29 | 58 | −0 | 52 |
| *Aug.* | 1 | 10 | 39 | 12 | 7 | 25 | 7 | 5 | 10 | 37 | ♒ 0 | 4 | 25 | ♒ 0 | 2 | 50 | −1 | 35 |
| | 6 | 14 | 33 | 48 | 7 | 29 | 32 | 7 | 10 | 26 | ♈ 5 | 54 | 5 | ♈ 5 | 51 | 38 | −2 | 27 |
| | 7 | 15 | 22 | 38 | 8 | 0 | 25 | 7 | 23 | 17 | ♈ 19 | 41 | 26 | ♈ 19 | 39 | 59 | −1 | 27 |
| | 13 | 21 | 0 | 6 | 8 | 5 | 46 | 10 | 16 | 3 | ♋ 17 | 16 | 55 | ♋ 17 | 12 | 32 | −4 | 23 |
| | 21 | 2 | 59 | 26 | 8 | 12 | 0 | 1 | 18 | 27 | ♎ 27 | 52 | 40 | ♎ 27 | 51 | 8 | −1 | 32 |
| | 23 | 4 | 34 | 19 | 8 | 13 | 47 | 2 | 12 | 16 | ♍ 23 | 22 | 15 | ♍ 23 | 21 | 1 | −1 | 14 |
| | 24 | 5 | 22 | 1 | 8 | 14 | 40 | 2 | 23 | 54 | ♐ 5 | 45 | 25 | ♐ 5 | 44 | 28 | −0 | 57 |
| | 26 | 6 | 57 | 41 | 8 | 16 | 27 | 3 | 16 | 51 | ♑ 0 | 16 | 15 | ♑ 0 | 15 | 25 | −0 | 50 |
| | 29 | 9 | 19 | 17 | 8 | 19 | 7 | 4 | 21 | 22 | ♒ 7 | 40 | 35 | ♒ 7 | 39 | 36 | −0 | 59 |
| | 30 | 10 | 5 | 51 | 8 | 20 | 1 | 5 | 3 | 7 | ♒ 20 | 35 | 29 | ♒ 20 | 33 | 14 | −2 | 15 |
| *Aug.* | 31 | 10 | 52 | 23 | 8 | 20 | 54 | 5 | 15 | 5 | ♓ 3 | 46 | 33 | ♓ 3 | 44 | 13 | −2 | 20 |
| *Sept.* | 9 | 18 | 53 | 3 | 8 | 29 | 0 | 9 | 14 | 36 | ♉ 12 | 15 | 30 | ♉ 12 | 12 | 55 | −2 | 35 |
| | 10 | 19 | 49 | 38 | 8 | 29 | 55 | 9 | 28 | 29 | ♉ 27 | 1 | 10 | ♉ 26 | 57 | 36 | −3 | 34 |
| | 11 | 20 | 44 | 11 | 9 | 0 | 49 | 10 | 12 | 11 | ♌ 11 | 41 | 54 | ♌ 11 | 38 | 31 | −3 | 23 |
| | 22 | 4 | 50 | 18 | 9 | 9 | 50 | 2 | 14 | 51 | ♐ 25 | 14 | 10 | ♐ 25 | 12 | 47 | −1 | 23 |
| | 28 | 9 | 29 | 57 | 9 | 15 | 16 | 4 | 25 | 13 | ♓ 11 | 6 | 59 | ♓ 11 | 5 | 36 | −1 | 23 |
| | 29 | 10 | 17 | 32 | 9 | 16 | 11 | 5 | 7 | 43 | ♓ 24 | 47 | 42 | ♓ 24 | 45 | 42 | −2 | 0 |
| *Sept.* | 30 | 11 | 7 | 54 | 9 | 17 | 5 | 5 | 20 | 33 | ♈ 8 | 51 | 42 | ♈ 8 | 48 | 6 | −3 | 36 |
| *Octo.* | 7 | 17 | 45 | 28 | 9 | 23 | 30 | 8 | 26 | 59 | ♋ 22 | 36 | 15 | ♋ 22 | 34 | 49 | −1 | 26 |
| | 8 | 18 | 40 | 11 | 9 | 24 | 25 | 9 | 10 | 44 | ♌ 7 | 11 | 54 | ♌ 7 | 10 | 0 | −1 | 54 |

# *LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

## Anno JULIANO MDCCXXXV. Currente.

| *Transitûs Limbi Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Distantia ☾ à ☉* | | | *Longitudo Centri Lunæ Observata.* | | | *Longitudo Centri Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | *S.* | o | ′ | *S.* | o | ′ | o | ′ | ″ | o | ′ | ″ | ′ | ″ |
| *Octo.* | 10 | 20 | 22 | 29 | 9 | 26 | 15 | 10 | 7 | 27 | ♍ 5 | 43 | 6 | ♍ 5 | 40 | 18 | —2 | 48 |
| | 11 | 21 | 10 | 56 | 9 | 27 | 10 | 10 | 20 | 19 | ♍19 | 36 | 36 | ♍19 | 34 | 20 | —2 | 16 |
| | 18 | 1 | 55 | 2 | 10 | 2 | 39 | 1 | 1 | 33 | ♐ 7 | 55 | 54 | ♐ 7 | 54 | 0 | —1 | 54 |
| | 22 | 5 | 4 | 23 | 10 | 6 | 19 | 2 | 16 | 45 | ♑27 | 3 | 36 | ♑27 | 3 | 52 | +0 | 16 |
| | 25 | 7 | 20 | 16 | 10 | 9 | 5 | 3 | 22 | 2 | ♓ 4 | 54 | 2 | ♓ 4 | 54 | 7 | +0 | 5 |
| | 27 | 8 | 53 | 55 | 10 | 10 | 55 | 4 | 17 | 3 | ♈ 1 | 48 | 56 | ♈ 1 | 49 | 3 | +0 | 7 |
| *Octo.* | 30 | 11 | 33 | 20 | 10 | 13 | 41 | 5 | 27 | 20 | ♉15 | 38 | 15 | ♉15 | 36 | 24 | —1 | 51 |
| *Nov.* | 5 | 17 | 29 | 21 | 10 | 19 | 16 | 8 | 22 | 15 | ♌17 | 11 | 58 | ♌17 | 8 | 58 | —3 | 0 |
| | 9 | 20 | 42 | 49 | 10 | 22 | 59 | 10 | 13 | 54 | ♎12 | 17 | 6 | ♎12 | 14 | 38 | —2 | 28 |
| | 10 | 21 | 29 | 17 | 10 | 23 | 54 | 10 | 25 | 55 | ♎25 | 19 | 23 | ♎25 | 17 | 44 | —1 | 39 |
| | 26 | 9 | 14 | 36 | 11 | 7 | 49 | 4 | 22 | 31 | ♉ 7 | 32 | 54 | ♉ 7 | 32 | 49 | —0 | 5 |
| | 27 | 10 | 12 | 1 | 11 | 8 | 45 | 5 | 6 | 28 | ♉22 | 39 | 15 | ♉22 | 38 | 32 | —0 | 43 |
| *Nov.* | 28 | 11 | 12 | 56 | 11 | 9 | 42 | 5 | 20 | 45 | ♊ 8 | 13 | 15 | ♊ 8 | 11 | 57 | —1 | 18 |
| *Dec.* | 7 | 19 | 27 | 55 | 11 | 18 | 7 | 9 | 24 | 26 | ♎21 | 22 | 0 | ♎21 | 17 | 0 | —5 | 0 |
| | 9 | 21 | 1 | 11 | 11 | 19 | 59 | 10 | 18 | 2 | ♏16 | 48 | 28 | ♏16 | 44 | 15 | —4 | 13 |
| | 10 | 21 | 48 | 36 | 11 | 20 | 55 | 10 | 29 | 25 | ♏29 | 16 | 14 | ♏29 | 12 | 26 | —3 | 48 |
| | 19 | 3 | 55 | 40 | 11 | 28 | 22 | 1 | 28 | 21 | ♓ 7 | 50 | 25 | ♓ 7 | 51 | 22 | +0 | 57 |
| | 20 | 4 | 39 | 36 | 11 | 29 | 17 | 2 | 10 | 11 | ♓20 | 31 | 34 | ♓20 | 35 | 1 | +3 | 27 |
| | 22 | 6 | 11 | 42 | 0 | 1 | 9 | 3 | 5 | 0 | ♈16 | 52 | 42 | ♈16 | 56 | 13 | +3 | 31 |
| *Dec.* | 23 | 7 | 1 | 29 | 0 | 2 | 5 | 3 | 18 | 2 | ♉ 0 | 41 | 0 | ♉ 0 | 44 | 7 | +3 | 7 |

## Anno JULIANO MDCCXXXV. Currente.

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Janu.* | 3 | 17 | 24 | 15 | 0 | 12 | 24 | 8 | 21 | 41 | ♎16 | 43 | 33 | ♎16 | 37 | 8 | —6 | 25 |
| | 9 | 22 | 8 | 57 | 0 | 17 | 59 | 11 | 1 | 40 | ♍ 2 | 8 | 1 | ♍ 2 | 4 | 8 | —3 | 53 |
| | 15 | 1 | 54 | 51 | 0 | 22 | 37 | 0 | 27 | 1 | ♓ 3 | 54 | 19 | ♓ 3 | 52 | 8 | —2 | 11 |
| | 17 | 3 | 23 | 20 | 0 | 24 | 28 | 1 | 20 | 21 | ♓29 | 23 | 16 | ♓29 | 23 | 47 | +0 | 31 |
| : : | 19 | 4 | 56 | 43 | 0 | 26 | 20 | 2 | 15 | 4 | ♈25 | 49 | 0 | ♈25 | 49 | 56 | +0 | 56 |
| | 20 | 5 | 46 | 46 | 0 | 27 | 15 | 2 | 28 | 3 | ♉ 9 | 29 | 10 | ♉ 9 | 32 | 14 | +3 | 4 |
| | 21 | 6 | 40 | 13 | 0 | 28 | 11 | 3 | 11 | 26 | ♉23 | 37 | 23 | ♉23 | 39 | 38 | +2 | 15 |
| | 22 | 7 | 37 | 0 | 0 | 29 | 7 | 3 | 25 | 13 | ♊ 8 | 14 | 3 | ♊ 8 | 14 | 31 | +0 | 28 |
| : : | 25 | 10 | 38 | 20 | 1 | 1 | 55 | 5 | 8 | 8 | ♋24 | 26 | 50 | ♋24 | 27 | 47 | +0 | 51 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXV. Currente.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error. Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S | o | ′ | S. | o | ′ | | o | ′ | ″ | o | ′ | ″ | ′ | ″ |
| *Feb.* | 14 | 2 | 7 | 44 | 1 | 19 | 28 | 1 | 1 | 13 | ♈ | 8 | 24 | 54 | ♈ 8 | 23 | 17 | −1 | 37 |
| | 20 | 7 | 25 | 16 | 1 | 24 | 59 | 3 | 20 | 12 | ♉ | 2 | 32 | 11 | ♉ 2 | 31 | 36 | −0 | 35 |
| *Feb.* | 21 | 8 | 24 | 0 | 1 | 25 | 55 | 4 | 4 | 19 | ♉ | 17 | 35 | 42 | ♉ 17 | 34 | 25 | −1 | 17 |
| *Mar.* | 4 | 17 | 58 | 22 | 2 | 5 | 59 | 8 | 27 | 47 | ♌ | 23 | 1 | 40 | ♌ 22 | 55 | 40 | −6 | 0 |
| | 19 | 5 | 20 | 2 | 2 | 18 | 41 | 2 | 18 | 20 | ♊ | 27 | 59 | 31 | ♊ 27 | 59 | 33 | +0 | 2 |
| | 21 | 7 | 14 | 24 | 2 | 20 | 30 | 3 | 16 | 13 | ♉ | 27 | 31 | 20 | ♉ 27 | 30 | 0 | −1 | 20 |
| *Mar.* | 24 | 9 | 55 | 56 | 2 | 23 | 13 | 4 | 27 | 39 | ♍ | 11 | 55 | 35 | ♍ 11 | 52 | 48 | −2 | 47 |
| *Apri.* | 7 | 21 | 12 | 0 | 3 | 5 | 46 | 10 | 16 | 26 | ♓ | 14 | 48 | 4 | ♓ 14 | 45 | 57 | −2 | 7 |
| | 19 | 6 | 59 | 33 | 3 | 15 | 37 | 3 | 12 | 49 | ♌ | 22 | 33 | 17 | ♌ 22 | 32 | 18 | −0 | 59 |
| | 22 | 9 | 30 | 44 | 3 | 18 | 17 | 4 | 22 | 56 | ♎ | 5 | 21 | 50 | ♎ 5 | 20 | 46 | −1 | 4 |
| | 23 | 10 | 19 | 56 | 3 | 19 | 10 | 5 | 5 | 43 | ♎ | 19 | 13 | 34 | ♎ 19 | 11 | 42 | −1 | 52 |
| *Maii.* | 3 | 18 | 20 | 43 | 3 | 28 | 1 | 9 | 2 | 46 | ♒ | 26 | 41 | 58 | ♒ 26 | 39 | 51 | −2 | 7 |
| | 19 | 7 | 28 | 31 | 4 | 11 | 17 | 3 | 22 | 37 | ♎ | 1 | 5 | 28 | ♎ 1 | 4 | 28 | −1 | 0 |
| *Maii.* | 20 | 8 | 16 | 58 | 4 | 12 | 10 | 4 | 5 | 32 | ♎ | 14 | 49 | 35 | ♎ 14 | 48 | 25 | −1 | 10 |
| *Junii.* | 5 | 20 | 52 | 33 | 4 | 26 | 11 | 10 | 14 | 56 | ♑ | 9 | 53 | 55 | ♑ 9 | 50 | 52 | −3 | 3 |
| | 14 | 4 | 35 | 30 | 5 | 3 | 15 | 2 | 8 | 18 | ♍ | 12 | 17 | 14 | ♍ 12 | 16 | 15 | −0 | 59 |
| | 15 | 5 | 25 | 56 | 5 | 4 | 7 | 2 | 21 | 59 | ♍ | 26 | 40 | 8 | ♍ 26 | 41 | 2 | +0 | 54 |
| | 16 | 6 | 15 | 10 | 5 | 5 | 0 | 3 | 5 | 17 | ♎ | 10 | 39 | 26 | ♎ 10 | 39 | 50 | +0 | 24 |
| *Junii.* | 23 | 11 | 56 | 0 | 5 | 11 | 7 | 5 | 28 | 38 | ♍ | 10 | 56 | 53 | ♍ 10 | 55 | 10 | −1 | 43 |
| *Julii.* | 12 | 3 | 18 | 0 | 5 | 26 | 56 | 1 | 20 | 6 | ♍ | 20 | 49 | 42 | ♍ 20 | 51 | 24 | +1 | 42 |
| | 15 | 5 | 49 | 0 | 5 | 29 | 34 | 3 | 0 | 11 | ♏ | 3 | 13 | 25 | ♏ 3 | 13 | 10 | −0 | 15 |
| | 17 | 7 | 26 | 45 | 6 | 1 | 20 | 3 | 24 | 52 | ♏ | 29 | 23 | 13 | ♏ 29 | 23 | 55 | +0 | 42 |
| *Julii.* | 18 | 8 | 15 | 32 | 6 | 2 | 12 | 4 | 6 | 40 | ♌ | 12 | 3 | 56 | ♌ 12 | 5 | 28 | +1 | 32 |
| *Aug.* | 2 | 20 | 11 | 48 | 6 | 15 | 25 | 10 | 4 | 44 | ♊ | 25 | 9 | 43 | ♊ 25 | 2 | 38 | −7 | 5 |
| | 3 | 21 | 11 | 44 | 6 | 16 | 18 | 10 | 18 | 57 | ♋ | 10 | 24 | 53 | ♋ 10 | 17 | 43 | −7 | 10 |
| *Aug.* | 10 | 2 | 49 | 57 | 6 | 21 | 38 | 1 | 14 | 50 | ♎ | 13 | 21 | 54 | ♎ 13 | 20 | 47 | −1 | 7 |
| *Sept.* | 9 | 3 | 11 | 56 | 7 | 17 | 32 | 1 | 21 | 19 | ♏ | 18 | 54 | 6 | ♏ 18 | 52 | 36 | −1 | 30 |
| | 10 | 4 | 3 | 5 | 7 | 18 | 26 | 2 | 3 | 53 | ♌ | 2 | 21 | 40 | ♌ 2 | 20 | 17 | −1 | 23 |
| | 12 | 5 | 42 | 57 | 7 | 20 | 14 | 2 | 28 | 2 | ♌ | 28 | 9 | 31 | ♌ 28 | 8 | 56 | −0 | 35 |
| | 13 | 6 | 31 | 9 | 7 | 21 | 8 | 3 | 9 | 42 | ♍ | 10 | 38 | 25 | ♍ 10 | 39 | 0 | +0 | 35 |
| | 17 | 9 | 32 | 30 | 7 | 24 | 44 | 4 | 25 | 1 | ♒ | 29 | 46 | 5 | ♒ 29 | 48 | 20 | +2 | 15 |
| | 18 | 10 | 16 | 12 | 7 | 25 | 38 | 5 | 6 | 19 | ♓ | 12 | 11 | 35 | ♓ 12 | 13 | 30 | +1 | 55 |
| | 20 | 11 | 45 | 55 | 7 | 27 | 26 | 5 | 29 | 19 | ♈ | 7 | 35 | 37 | ♈ 7 | 35 | 51 | +0 | 14 |

# LUNA MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ

## Anno JULIANO MDCCXXXV.

| Transitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | | Longitudo Centri Lunæ Comput. | | | | Error. Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M. | H. | D. | ′ | ″ | S. | ° | ′ | S | ° | ′ | | ° | ′ | ″ | | ° | ′ | ″ | ′ | ″ |
| Octob. | 8 | 2 | 42 | 45 | | 8 | 12 | 55 | 1 | 13 | 18 | ♈ | 9 | 32 | 6 | ♈ | 9 | 30 | 6 | −2 | 0 |
| | 12 | 5 | 58 | 56 | | 8 | 16 | 35 | 3 | 0 | 26 | ♒ | 0 | 18 | 34 | ♒ | 0 | 19 | 45 | +1 | 11 |
| | 15 | 8 | 10 | 38 | | 8 | 19 | 19 | 4 | 4 | 38 | ♓ | 7 | 6 | 22 | ♓ | 7 | 8 | 2 | +1 | 40 |
| | 16 | 8 | 54 | 15 | | 8 | 20 | 14 | 4 | 16 | 9 | ♓ | 19 | 35 | 18 | ♓ | 19 | 36 | 35 | +1 | 17 |
| | 18 | 10 | 24 | 18 | | 8 | 22 | 4 | 5 | 9 | 40 | ♈ | 15 | 18 | 30 | ♈ | 15 | 18 | 15 | −0 | 15 |
| | 28 | 19 | 24 | 57 | | 9 | 1 | 18 | 9 | 22 | 15 | ♍ | 8 | 28 | 22 | ♍ | 8 | 24 | 0 | −4 | 22 |
| Octob. | 29 | 20 | 16 | 24 | | 9 | 2 | 13 | 10 | 5 | 56 | ♍ | 23 | 1 | 58 | ♍ | 22 | 57 | 3 | −4 | 55 |
| Nov. | 10 | 5 | 21 | 10 | | 9 | 12 | 23 | 2 | 20 | 25 | ♒ | 19 | 40 | 49 | ♒ | 19 | 42 | 36 | +1 | 47 |
| | 11 | 6 | 4 | 40 | | 9 | 13 | 19 | 3 | 1 | 49 | ♓ | 1 | 53 | 50 | ♓ | 1 | 55 | 4 | +1 | 14 |
| | 12 | 6 | 47 | 42 | | 9 | 14 | 14 | 3 | 13 | 18 | ♓ | 14 | 9 | 44 | ♓ | 14 | 11 | 46 | +2 | 2 |
| | 14 | 8 | 15 | 32 | | 9 | 16 | 5 | 4 | 6 | 46 | ♈ | 9 | 21 | 29 | ♈ | 9 | 21 | 48 | +0 | 19 |
| | 17 | 10 | 42 | 40 | | 9 | 18 | 52 | 5 | 13 | 59 | ♉ | 19 | 53 | 45 | ♉ | 19 | 51 | 53 | −1 | 52 |
| Nov. | 28 | 20 | 44 | 5 | | 9 | 29 | 8 | 10 | 13 | 37 | ♍ | 0 | 55 | 50 | ♍ | 0 | 51 | 21 | −4 | 29 |
| Dec. | 11 | 6 | 8 | 19 | | 10 | 10 | 19 | 3 | 3 | 17 | ♈ | 3 | 43 | 31 | ♈ | 3 | 46 | 30 | +2 | 59 |
| | 12 | 6 | 52 | 39 | | 10 | 11 | 15 | 3 | 15 | 10 | ♈ | 16 | 22 | 23 | ♈ | 16 | 25 | 0 | +2 | 37 |
| | 13 | 7 | 39 | 7 | | 10 | 12 | 10 | 3 | 27 | 22 | ♈ | 29 | 23 | 47 | ♈ | 29 | 25 | 40 | +1 | 53 |
| | 14 | 8 | 28 | 30 | | 10 | 13 | 6 | 4 | 9 | 55 | ♉ | 12 | 53 | 21 | ♉ | 12 | 54 | 4 | +0 | 43 |
| | 15 | 9 | 21 | 18 | | 10 | 14 | 3 | 4 | 22 | 52 | ♉ | 26 | 55 | 5 | ♉ | 26 | 54 | 18 | −0 | 47 |

## Anno JULIANO MDCCXXXVI. Currente.

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan. | 5 | 2 | 39 | 50 | | 11 | 2 | 44 | 1 | 8 | 7 | ♓ | 4 | 41 | 24 | ♓ | 4 | 41 | 0 | −0 | 24 |
| : : | 11 | 7 | 8 | 2 | | 11 | 8 | 18 | 3 | 18 | 33 | ♉ | 20 | 11 | 52 | ♉ | 20 | 13 | 54 | +2 | 2 |
| | 13 | 8 | 57 | 9 | | 11 | 10 | 10 | 4 | 14 | 58 | ♊ | 18 | 34 | 42 | ♊ | 18 | 33 | 24 | −1 | 18 |
| | 14 | 9 | 56 | 8 | | 11 | 11 | 7 | 4 | 28 | 48 | ♋ | 3 | 36 | 21 | ♋ | 3 | 34 | 33 | −1 | 48 |
| Feb. | 11 | 8 | 37 | 30 | | 0 | 6 | 8 | 4 | 8 | 7 | ♋ | 11 | 8 | 46 | ♋ | 11 | 8 | 0 | −0 | 46 |
| | 12 | 9 | 36 | 40 | | 0 | 7 | 3 | 4 | 22 | 16 | ♋ | 26 | 25 | 49 | ♋ | 26 | 23 | 35 | −2 | 14 |
| Mart. | 5 | 2 | 59 | 27 | | 0 | 26 | 17 | 1 | 14 | 12 | ♉ | 11 | 2 | 23 | ♉ | 11 | 0 | 23 | −2 | 0 |
| | 8 | 5 | 31 | 53 | | 0 | 29 | 1 | 2 | 21 | 38 | ♊ | 21 | 10 | 41 | ♊ | 21 | 9 | 40 | −1 | 1 |
| | 10 | 7 | 23 | 20 | | 1 | 0 | 51 | 3 | 18 | 36 | ♋ | 19 | 49 | 8 | ♋ | 19 | 46 | 48 | −2 | 20 |
| | 11 | 8 | 20 | 18 | | 1 | 1 | 45 | 4 | 2 | 37 | ♌ | 4 | 44 | 20 | ♌ | 4 | 41 | 11 | −3 | 9 |
| | 12 | 9 | 17 | 7 | | 1 | 2 | 40 | 4 | 16 | 52 | ♌ | 19 | 58 | 53 | ♌ | 19 | 56 | 5 | −2 | 48 |
| | 13 | 10 | 13 | 27 | | 1 | 3 | 35 | 5 | 1 | 16 | ♍ | 5 | 27 | 50 | ♍ | 5 | 25 | 54 | −1 | 56 |
| | 15 | 12 | 0 | 0 | | 1 | 5 | 24 | 6 | 0 | 0 | ♎ | 6 | 36 | 34 | ♎ | 6 | 36 | 12 | −0 | 22 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXVI. Currente.

| Tranſitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Diſtantia ☾ à ☉ | | | Longitudo Centri Lunæ Obſervata. | | | Longitudo Centri Lunæ Comput. | | | Error. Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | S | o | ′ | S. | o | ′ | o | ′ | ″ | o | ′ | ″ | ′ | ″ |
| *Apri.* | 4 | 3 | 28 | 19 | 1 | 22 | 30 | 1 | 20 | 35 | ♊ 17 | 0 | 16 | ♊ 16 | 57 | 32 | −2 | 44 |
| | 5 | 4 | 22 | 30 | 1 | 23 | 24 | 2 | 3 | 33 | ♋ 0 | 54 | 50 | ♋ 0 | 52 | 38 | −2 | 12 |
| | 7 | 6 | 13 | 5 | 1 | 25 | 12 | 3 | 0 | 29 | ♋ 29 | 31 | 50 | ♋ 29 | 28 | 45 | −3 | 5 |
| | 8 | 7 | 8 | 12 | 1 | 26 | 6 | 3 | 14 | 22 | ♌ 14 | 12 | 16 | ♌ 14 | 8 | 18 | −3 | 58 |
| | 10 | 8 | 56 | 41 | 1 | 27 | 53 | 4 | 12 | 35 | ♍ 14 | 6 | 57 | ♍ 14 | 2 | 50 | −4 | 7 |
| | 11 | 9 | 50 | 24 | 1 | 28 | 47 | 4 | 26 | 43 | ♍ 29 | 15 | 0 | ♍ 29 | 11 | 10 | −3 | 50 |
| | 23 | 19 | 57 | 30 | 2 | 9 | 28 | 9 | 27 | 19 | ♓ 11 | 57 | 42 | ♓ 11 | 56 | 11 | −1 | 31 |
| | 24 | 20 | 40 | 10 | 2 | 10 | 21 | 10 | 8 | 40 | ♓ 24 | 10 | 42 | ♓ 24 | 9 | 45 | −0 | 57 |
| | 25 | 21 | 23 | 16 | 2 | 11 | 14 | 10 | 20 | 6 | ♈ 6 | 32 | 30 | ♈ 6 | 31 | 34 | −0 | 56 |
| *Maii.* | 4 | 4 | 9 | 16 | 2 | 18 | 20 | 1 | 29 | 38 | ♋ 25 | 10 | 52 | ♋ 25 | 10 | 15 | −0 | 37 |
| | 7 | 6 | 52 | 25 | 2 | 20 | 59 | 3 | 11 | 12 | ♍ 9 | 2 | 50 | ♍ 9 | 1 | 58 | −0 | 52 |
| | 9 | 8 | 35 | 33 | 2 | 22 | 45 | 4 | 9 | 2 | ♎ 8 | 27 | 56 | ♎ 8 | 25 | 14 | −2 | 42 |
| | 10 | 9 | 27 | 50 | 2 | 23 | 38 | 4 | 22 | 45 | ♎ 23 | 7 | 33 | ♎ 23 | 5 | 35 | −1 | 58 |
| | 11 | 10 | 20 | 48 | 2 | 24 | 31 | 5 | 6 | 15 | ♏ 7 | 42 | 20 | ♏ 7 | 40 | 55 | −1 | 25 |
| *Maii.* | 23 | 20 | 1 | 15 | 3 | 5 | 5 | 10 | 0 | 31 | ♈ 13 | 49 | 51 | ♈ 13 | 48 | 25 | −1 | 26 |
| *Junii.* | 1 | 2 | 59 | 13 | 3 | 12 | 7 | 1 | 12 | 36 | ♌ 4 | 58 | 27 | ♌ 4 | 59 | 10 | +0 | 43 |
| | 8 | 9 | 7 | 21 | 3 | 18 | 16 | 4 | 18 | 52 | ♍ 16 | 52 | 53 | ♍ 16 | 52 | 8 | −0 | 45 |
| | 9 | 10 | 0 | 6 | 3 | 19 | 9 | 5 | 1 | 47 | ♐ 0 | 52 | 40 | ♐ 0 | 52 | 31 | −0 | 9 |
| | 22 | 20 | 12 | 16 | 4 | 0 | 31 | 10 | 4 | 56 | ♉ 16 | 48 | 13 | ♉ 16 | 44 | 20 | −3 | 53 |
| *Junii.* | 24 | 21 | 56 | 40 | 4 | 2 | 17 | 11 | 0 | 19 | ♊ 14 | 15 | 54 | ♊ 14 | 12 | 0 | −3 | 54 |
| *Julii.* | 9 | 10 | 31 | 56 | 4 | 14 | 36 | 5 | 8 | 56 | ♑ 6 | 49 | 27 | ♑ 6 | 51 | 17 | +1 | 50 |
| | 21 | 19 | 43 | 27 | 4 | 25 | 7 | 9 | 28 | 2 | ♊ 7 | 42 | 27 | ♊ 7 | 36 | 53 | −5 | 34 |
| | 22 | 20 | 37 | 34 | 4 | 26 | 0 | 10 | 11 | 3 | ♊ 21 | 40 | 45 | ♊ 21 | 34 | 27 | −6 | 18 |
| | 30 | 3 | 14 | 25 | 5 | 2 | 12 | 1 | 19 | 59 | ♎ 8 | 32 | 38 | ♎ 8 | 35 | 20 | +2 | 42 |
| *Julii.* | 31 | 4 | 7 | 45 | 5 | 3 | 5 | 2 | 4 | 7 | ♎ 23 | 29 | 26 | ♎ 23 | 32 | 17 | +2 | 51 |
| *Aug.* | :: 1 | 5 | 0 | 25 | 5 | 3 | 58 | 2 | 17 | 54 | ♏ 8 | 1 | 30 | ♏ 8 | 6 | 0 | +4 | 30 |
| | 3 | 6 | 45 | 18 | 5 | 5 | 45 | 3 | 14 | 22 | ♐ 6 | 2 | 32 | ♐ 6 | 5 | 35 | +3 | 3 |
| | 4 | 7 | 38 | 29 | 5 | 6 | 38 | 3 | 27 | 1 | ♐ 19 | 33 | 52 | ♐ 19 | 35 | 47 | +1 | 55 |
| | 8 | 10 | 54 | 7 | 5 | 10 | 10 | 5 | 14 | 5 | ♒ 10 | 54 | 57 | ♒ 10 | 57 | 58 | +3 | 1 |
| | 21 | 21 | 13 | 20 | 5 | 21 | 42 | 10 | 18 | 56 | ♋ 28 | 38 | 20 | ♋ 28 | 30 | 55 | −7 | 25 |
| *Aug.* | 31 | 5 | 32 | 25 | 5 | 29 | 47 | 2 | 25 | 55 | ♐ 15 | 2 | 12 | ♐ 15 | 4 | 54 | +2 | 42 |
| *Sept.* | 2 | 7 | 15 | 29 | 6 | 1 | 34 | 3 | 20 | 50 | ♑ 11 | 36 | 48 | ♑ 11 | 40 | 6 | +3 | 18 |
| | 29 | 5 | 9 | 8 | 6 | 25 | 4 | 2 | 18 | 54 | ♑ 6 | 46 | 38 | ♑ 6 | 47 | 54 | +1 | 16 |

# LUNA MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ

## Anno JULIANO MDCCXXXVI.

| Tranſitûs Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Diſtantia ☾ à ☉ | | | Longitudo Centri Lunæ Obſervata. | | | Longitudo Centri Lunæ Comput. | | | Error. Comp. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | H. | D. | ′ | ″ | S. | ° | ′ | S | ° | ′ | ° | ′ | ″ | ° | ′ | ″ | ′ | ″ | |
| *Octob.* | 1 | 6 | 48 | 28 | 6 | 26 | 53 | 3 | 13 | 10 | ♒ 2 | 41 | 12 | ♒ 2 | 42 | 29 | + | 1 | 17 |
| | 3 | 8 | 19 | 24 | 6 | 28 | 42 | 4 | 6 | 12 | ♒27 | 25 | 52 | ♒27 | 28 | 18 | + | 2 | 26 |
| | 4 | 9 | 2 | 40 | 6 | 29 | 36 | 4 | 17 | 24 | ♓ 9 | 35 | 28 | ♓ 9 | 38 | 20 | + | 2 | 52 |
| | 6 | 10 | 27 | 39 | 7 | 1 | 25 | 5 | 9 | 31 | ♈ 3 | 54 | 11 | ♈ 3 | 54 | 58 | + | 0 | 47 |
| | 7 | 11 | 12 | 29 | 7 | 2 | 20 | 5 | 20 | 36 | ♈16 | 10 | 32 | ♈16 | 10 | 10 | − | 0 | 22 |
| *Octob.* | 19 | 21 | 24 | 0 | 7 | 13 | 20 | 10 | 22 | 49 | ♍ 0 | 32 | 57 | ♍ 0 | 28 | 32 | − | 4 | 25 |
| *Nov.* | 1 | 7 | 42 | 8 | 7 | 24 | 25 | 3 | 26 | 57 | ♓17 | 14 | 22 | ♓17 | 14 | 42 | + | 0 | 20 |
| | 2 | 8 | 24 | 24 | 7 | 25 | 20 | 4 | 8 | 11 | ♓29 | 21 | 56 | ♓29 | 22 | 36 | + | 0 | 40 |
| *Nov.* | 29 | 6 | 20 | 2 | 8 | 19 | 30 | 3 | 5 | 29 | ♓24 | 28 | 32 | ♓24 | 27 | 20 | − | 1 | 12 |
| *Dec.* | 24 | 2 | 46 | 36 | 9 | 11 | 55 | 1 | 9 | 26 | ♒24 | 34 | 6 | ♒24 | 33 | 4 | − | 1 | 2 |
| | 26 | 4 | 14 | 52 | 9 | 13 | 46 | 2 | 2 | 19 | ♓19 | 22 | 36 | ♓19 | 21 | 24 | − | 1 | 12 |

## Anno JULIANO MDCCXXXVII. Currente.

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Jan.* | 3 | 10 | 27 | 8 | 9 | 21 | 13 | 5 | 6 | 48 | ♋ 1 | 22 | 40 | ♋ 1 | 20 | 13 | − | 2 | 27 |
| | 25 | 4 | 17 | 28 | 10 | 10 | 46 | 2 | 3 | 32 | ♈20 | 58 | 5 | ♈20 | 56 | 0 | − | 2 | 5 |
| | 27 | 5 | 44 | 57 | 10 | 12 | 37 | 2 | 26 | 27 | ♉15 | 30 | 33 | ♉15 | 30 | 45 | + | 0 | 12 |
| :: | 28 | 6 | 31 | 36 | 10 | 13 | 32 | 3 | 8 | 14 | ♉28 | 7 | 50 | ♉28 | 8 | 25 | + | 0 | 35 |
| | 30 | 8 | 12 | 17 | 10 | 15 | 23 | 4 | 2 | 49 | ♊24 | 30 | 55 | ♊24 | 31 | 8 | + | 0 | 13 |
| *Feb.* | 25 | 5 | 13 | 1 | 11 | 8 | 24 | 2 | 17 | 26 | ♊ 5 | 53 | 7 | ♊ 5 | 51 | 50 | − | 1 | 17 |
| | 26 | 6 | 2 | 13 | 11 | 9 | 19 | 2 | 29 | 30 | ♊18 | 46 | 10 | ♊18 | 46 | 13 | + | 0 | 3 |
| | 27 | 6 | 53 | 44 | 11 | 10 | 14 | 3 | 11 | 57 | ♋ 2 | 3 | 10 | ♋ 2 | 3 | 18 | + | 0 | 8 |
| *Feb.* | 28 | 7 | 47 | 15 | 11 | 11 | 9 | 3 | 24 | 49 | ♋15 | 47 | 46 | ♋15 | 47 | 4 | − | 0 | 42 |
| *Mart.* | 29 | 7 | 24 | 55 | 0 | 6 | 32 | 3 | 18 | 18 | ♌ 8 | 1 | 9 | ♌ 8 | 0 | 49 | − | 0 | 20 |
| | 30 | 8 | 19 | 6 | 0 | 7 | 26 | 4 | 1 | 57 | ♌22 | 29 | 50 | ♌22 | 28 | 42 | − | 1 | 8 |
| *Apri.* | 2 | 11 | 4 | 10 | 0 | 10 | 8 | 5 | 14 | 48 | ♍ 8 | 24 | 49 | ♍ 8 | 25 | 33 | + | 0 | 44 |
| | 26 | 6 | 11 | 24 | 1 | 0 | 39 | 2 | 29 | 49 | ♌17 | 1 | 43 | ♌17 | 1 | 8 | − | 0 | 35 |
| *Apri.* | 27 | 7 | 3 | 48 | 1 | 1 | 33 | 3 | 13 | 22 | ♍ 1 | 16 | 28 | ♍ 1 | 16 | 30 | + | 0 | 2 |
| *Maii.* | 22 | 3 | 16 | 4 | 1 | 22 | 44 | 1 | 16 | 22 | ♋29 | 0 | 18 | ♋29 | 0 | 11 | − | 0 | 7 |
| | 23 | 4 | 8 | 21 | 1 | 23 | 37 | 1 | 29 | 14 | ♌12 | 45 | 30 | ♌12 | 46 | 50 | + | 1 | 20 |
| | 24 | 5 | 0 | 19 | 1 | 24 | 30 | 2 | 12 | 27 | ♌26 | 46 | 3 | ♌26 | 46 | 25 | + | 0 | 22 |
| *Maii* | 27 | 7 | 35 | 15 | 1 | 27 | 8 | 3 | 23 | 47 | ♍10 | 12 | 50 | ♍10 | 12 | 15 | − | 0 | 35 |
| *Junii* | 22 | 4 | 40 | 56 | 2 | 19 | 5 | 2 | 9 | 15 | ♍21 | 7 | 32 | ♍21 | 9 | 42 | + | 2 | 10 |

# LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXVII. Currente.

| Transitus Limbi Lunæ T. æq. | | | | | Argument. Annuum. | | | Distantia ☾ à ☉ | | | Longitudo Centri Lunæ Observata. | | | Longitudo Centri Lunæ Comput. | | | Error Comp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | H. | D. | ′ | ″ | ☊ | ° | ′ | S. | ° | ′ | ° | ′ | ″ | ° | ′ | ″ | ′ | ″ |
| *Julii.* | 10 | 19 | 40 | 8 | 3 | 4 | 52 | 9 | 27 | 3 | ♉25 | 57 | 0 | ♉25 | 54 | 18 | −2 | 42 |
| | 12 | 21 | 17 | 35 | 3 | 6 | 37 | 10 | 20 | 47 | ♊21 | 38 | 14 | ♊21 | 36 | 50 | −1 | 24 |
| | 13 | 22 | 9 | 42 | 3 | 7 | 30 | 11 | 3 | 0 | ♋ 5 | 0 | 44 | ♋ 4 | 58 | 25 | −2 | 19 |
| | 24 | 7 | 1 | 16 | 3 | 16 | 20 | 3 | 18 | 8 | ♍29 | 59 | 42 | ♌ 0 | 1 | 22 | +1 | 40 |
| *Julii.* | 26 | 8 | 52 | 20 | 3 | 18 | 6 | 4 | 15 | 4 | ♌28 | 49 | 2 | ♌28 | 49 | 14 | +0 | 12 |
| *Aug.* | 19 | 4 | 2 | 14 | 4 | 8 | 28 | 2 | 3 | 10 | ♍10 | 38 | 1 | ♍10 | 42 | 31 | +4 | 30 |
| *Sept.* | 19 | 5 | 38 | 32 | 5 | 5 | 24 | 2 | 26 | 29 | ♎ 4 | 10 | 9 | ♎ 4 | 11 | 6 | +0 | 57 |
| | 20 | 6 | 33 | 6 | 5 | 6 | 19 | 3 | 9 | 39 | ♎18 | 6 | 3 | ♎18 | 7 | 14 | +1 | 11 |
| *Sept.* | 21 | 7 | 25 | 29 | 5 | 7 | 13 | 3 | 22 | 23 | ♏ 1 | 37 | 27 | ♏ 1 | 39 | 10 | +1 | 43 |
| *Nov.* | 13 | 2 | 9 | 41 | 6 | 24 | 2 | 1 | 2 | 49 | ♎ 5 | 55 | 20 | ♎ 5 | 52 | 57 | −2 | 23 |
| | 16 | 4 | 55 | 0 | 6 | 26 | 50 | 2 | 12 | 35 | ♏18 | 37 | 25 | ♏18 | 33 | 32 | −3 | 53 |
| | 17 | 5 | 43 | 20 | 6 | 27 | 46 | 2 | 24 | 59 | ♐ 1 | 47 | 5 | ♐ 1 | 43 | 32 | −3 | 33 |
| | 18 | 6 | 28 | 56 | 6 | 28 | 41 | 3 | 7 | 1 | ♐14 | 32 | 38 | ♐14 | 30 | 0 | −2 | 38 |
| | 19 | 7 | 12 | 38 | 6 | 29 | 37 | 3 | 18 | 43 | ♐27 | 2 | 27 | ♐26 | 59 | 11 | −3 | 16 |
| | 21 | 8 | 37 | 25 | 7 | 1 | 28 | 4 | 11 | 24 | ♑21 | 31 | 57 | ♑21 | 29 | 22 | −2 | 35 |
| | 22 | 9 | 20 | 1 | 7 | 2 | 24 | 4 | 22 | 31 | ♉ 3 | 42 | 46 | ♉ 3 | 40 | 28 | −2 | 18 |

Anno JULIANO MDCCXXXVIII. Currente.

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Janu.* | 14 | 4 | 28 | 25 | 8 | 19 | 59 | 2 | 5 | 40 | ♑11 | 38 | 39 | ♑11 | 37 | 41 | −0 | 58 |
| *Feb.* | 11 | 3 | 5 | 10 | 9 | 15 | 0 | 1 | 14 | 21 | ♑18 | 45 | 47 | ♑18 | 42 | 7 | −3 | 40 |
| | 17 | 7 | 37 | 52 | 9 | 20 | 30 | 3 | 23 | 13 | ♋ 2 | 57 | 25 | ♋ 2 | 59 | 3 | +1 | 38 |
| | 18 | 8 | 28 | 10 | 9 | 21 | 25 | 4 | 5 | 12 | ♋15 | 50 | 53 | ♋15 | 52 | 24 | +1 | 31 |
| *Feb.* | 20 | 10 | 12 | 7 | 9 | 23 | 15 | 5 | 0 | 0 | ♌12 | 43 | 50 | ♌12 | 44 | 22 | +0 | 32 |
| *Mar.* | 12 | 2 | 26 | 40 | 10 | 10 | 37 | 1 | 5 | 17 | ♉ 8 | 32 | 41 | ♉ 8 | 31 | 18 | −1 | 23 |
| *Mar.* | 15 | 4 | 41 | 58 | 10 | 13 | 19 | 2 | 9 | 5 | ♊15 | 20 | 6 | ♊15 | 21 | 28 | +1 | 22 |
| *Aprii.* | 14 | 5 | 1 | 35 | 11 | 9 | 24 | 2 | 12 | 27 | ♋18 | 4 | 58 | ♋18 | 5 | 51 | +0 | 53 |
| | 15 | 5 | 51 | 2 | 11 | 10 | 17 | 2 | 24 | 26 | ♌ 0 | 48 | 58 | ♌ 0 | 50 | 33 | +1 | 35 |
| | 17 | 7 | 31 | 0 | 11 | 12 | 4 | 3 | 19 | 29 | ♌27 | 19 | 54 | ♌27 | 21 | 13 | +1 | 19 |
| *Aprii.* | 19 | 9 | 12 | 50 | 11 | 13 | 51 | 4 | 16 | 11 | ♍25 | 44 | 27 | ♍25 | 44 | 54 | +0 | 27 |
| *Maii.* | 15 | 6 | 14 | 2 | 0 | 6 | 0 | 3 | 0 | 34 | ♍ 5 | 39 | 50 | ♍ 5 | 39 | 55 | +0 | 5 |
| | 16 | 7 | 3 | 15 | 0 | 6 | 52 | 3 | 13 | 39 | ♍19 | 27 | 43 | ♍19 | 27 | 20 | −0 | 23 |
| | 18 | 8 | 45 | 7 | 0 | 8 | 38 | 4 | 11 | 4 | ♎18 | 33 | 57 | ♎18 | 31 | 42 | −2 | 15 |
| | 19 | 9 | 39 | 9 | 0 | 9 | 31 | 4 | 25 | 18 | ♏ 3 | 51 | 30 | ♏ 3 | 49 | 30 | −2 | 0 |
| | 20 | 10 | 36 | 7 | 0 | 10 | 24 | 5 | 9 | 48 | ♍19 | 34 | 34 | ♍19 | 31 | 37 | −2 | 57 |

# *LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

## Anno JULIANO MDCCXXXVIII. Currente.

| *Transitûs Limbi Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Distantia ☾ à ☉* | | | *Longitudo Centri Lunæ Observata.* | | | *Longitudo Centri Lunæ Comput.* | | | *Error Comp.* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M. | D. | H. | ′ | ″ | *S.* | ○ | ′ | *S.* | ○ | ′ | ○ | ′ | ″ | ○ | ′ | ″ | ′ | ″ |
| *Junii.* | 11 | 4 | 11 | 14 | 0 | 28 | 51 | 2 | 0 | 3 | ♍ 1 | 19 | 40 | ♍ 1 | 21 | 1 | +1 | 21 |
| *Cent.* | 14 | 6 | 38 | 21 | 1 | 1 | 28 | 3 | 9 | 10 | ♎ 12 | 42 | 47 | ♎ 12 | 41 | 35 | −1 | 12 |
| | 15 | 7 | 28 | 20 | 1 | 2 | 21 | 3 | 22 | 57 | ♎ 27 | 18 | 40 | ♎ 27 | 15 | 48 | −2 | 52 |
| | 18 | 10 | 18 | 9 | 1 | 5 | 0 | 5 | 5 | 51 | ♐ 13 | 23 | 19 | ♐ 13 | 17 | 34 | −5 | 45 |
| *Julii.* | 15 | 8 | 5 | 13 | 1 | 27 | 49 | 4 | 3 | 46 | ♐ 6 | 49 | 22 | ♐ 6 | 45 | 54 | −3 | 28 |
| | 16 | 9 | 4 | 5 | 1 | 28 | 42 | 4 | 17 | 59 | ♐ 22 | 2 | 25 | ♐ 21 | 58 | 20 | −4 | 5 |
| | 17 | 10 | 4 | 31 | 1 | 29 | 35 | 5 | 2 | 9 | ♑ 7 | 19 | 0 | ♑ 7 | 14 | 36 | −4 | 24 |
| *Julii.* | 30 | 20 | 46 | 40 | 2 | 11 | 2 | 10 | 13 | 3 | ♋ 0 | 55 | 50 | ♋ 0 | 56 | 31 | +0 | 41 |
| *Aug.* | 11 | 5 | 59 | 18 | 2 | 20 | 46 | 3 | 2 | 41 | ♐ 1 | 56 | 44 | ♐ 1 | 57 | 27 | +0 | 43 |
| *Sept.* | 11 | 7 | 44 | 20 | 3 | 17 | 36 | 3 | 27 | 4 | ♑ 26 | 12 | 32 | ♑ 26 | 11 | 39 | −0 | 53 |
| | 12 | 8 | 39 | 43 | 3 | 18 | 30 | 4 | 10 | 26 | ♒ 10 | 27 | 10 | ♒ 10 | 26 | 7 | −1 | 3 |
| *Sept.* | 13 | 9 | 32 | 41 | 3 | 19 | 25 | 4 | 23 | 30 | ♒ 24 | 29 | 0 | ♒ 24 | 28 | 6 | −0 | 54 |
| *Octo.* | 8 | 5 | 40 | 0 | 4 | 11 | 12 | 2 | 25 | 35 | ♑ 21 | 51 | 18 | ♑ 21 | 53 | 6 | +1 | 48 |
| *Octo.* | 11 | 8 | 20 | 0 | 4 | 13 | 57 | 4 | 5 | 16 | ♓ 3 | 52 | 26 | ♓ 3 | 52 | 3 | −0 | 23 |
| *Nov.* | 5 | 4 | 29 | 57 | 5 | 6 | 3 | 2 | 6 | 37 | ♒ 1 | 19 | 33 | ♒ 1 | 16 | 42 | −2 | 51 |
| | 6 | 5 | 25 | 42 | 5 | 6 | 59 | 2 | 20 | 17 | ♒ 15 | 44 | 57 | ♒ 15 | 41 | 55 | −3 | 2 |
| | 8 | 7 | 6 | 45 | 5 | 8 | 50 | 3 | 16 | 21 | ♓ 13 | 16 | 46 | ♓ 13 | 14 | 2 | −2 | 44 |
| *Nov.* | 10 | 8 | 37 | 44 | 5 | 10 | 41 | 4 | 10 | 45 | ♈ 9 | 27 | 12 | ♈ 9 | 27 | 5 | −0 | 7 |
| *Dec.* | 8 | 7 | 20 | 36 | 6 | 5 | 49 | 3 | 20 | 51 | ♈ 18 | 10 | 47 | ♈ 18 | 9 | 9 | −1 | 38 |
| * | 12 | 5 | 27 | 6 | 6 | 9 | 22 | 5 | 4 | 6 | ♊ 5 | 28 | 48 | ♊ 5 | 30 | 5 | +1 | 17 |

## Anno JULIANO MDCCXXXIX. Currente.

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Feb.* | 2 | 4 | 38 | 49 | 7 | 26 | 7 | 2 | 8 | 39 | ♉ 3 | 39 | 5 | ♉ 3 | 29 | 45 | +0 | 40 |
| | 3 | 5 | 23 | 54 | 7 | 27 | 3 | 2 | 20 | 33 | ♉ 16 | 25 | 30 | ♉ 16 | 26 | 2 | +0 | 32 |
| | 4 | 6 | 9 | 14 | 7 | 27 | 58 | 3 | 2 | 12 | ♉ 28 | 56 | 8 | ♉ 28 | 56 | 18 | +0 | 10 |
| *Feb.* | 6 | 7 | 42 | 6 | 7 | 29 | 48 | 3 | 25 | 3 | ♊ 23 | 28 | 33 | ♊ 23 | 29 | 28 | +0 | 55 |
| *Mart.* | 5 | 5 | 34 | 54 | 8 | 23 | 40 | 2 | 22 | 30 | ♊ 18 | 27 | 25 | ♊ 18 | 29 | 30 | +2 | 5 |
| | 7 | 7 | 10 | 40 | 8 | 25 | 29 | 3 | 15 | 24 | ♋ 12 | 55 | 36 | ♋ 12 | 57 | 47 | +2 | 11 |
| | 8 | 7 | 59 | 4 | 8 | 26 | 24 | 3 | 26 | 53 | ♋ 25 | 13 | 13 | ♋ 25 | 15 | 38 | +2 | 25 |
| | 9 | 8 | 47 | 28 | 8 | 27 | 18 | 4 | 8 | 28 | ♌ 7 | 40 | 43 | ♌ 7 | 43 | 13 | +2 | 30 |
| | 10 | 9 | 35 | 38 | 8 | 28 | 13 | 4 | 20 | 12 | ♌ 20 | 23 | 55 | ♌ 20 | 25 | 6 | +1 | 11 |

# *LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.*

Anno JULIANO MDCCXXXIX. Currente.

| *Tranſitûs Limbi Lunæ T. æq.* | | | | | *Argument. Annuum.* | | | *Diſtantia ☾ à ☉* | | | *Longitudo Centri Lunæ Obſervata.* | | | *Longitudo Centri Lunæ Comput.* | | | *Error Comp.* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *M.* | *D.* | *H.* | *'* | *''* | *s* | *°* | *'* | *s* | *°* | *'* | *°* | *'* | *''* | *°* | *'* | *''* | | *'* | *''* |
| *Apri.* | 3 | 5 | 3 | 14 | 9 | 18 | 59 | 2 | 13 | 15 | ♋ | 7 | 55 | 32 | ♋ | 7 | 55 | 47 | + | 0 | 15 |
| | 7 | 8 | 14 | 32 | 9 | 22 | 34 | 3 | 29 | 51 | ♌ | 27 | 33 | 30 | ♌ | 27 | 34 | 34 | + | 1 | 4 |
| | 8 | 9 | 1 | 42 | 9 | 23 | 28 | 4 | 12 | 0 | ♍ | 10 | 37 | 0 | ♍ | 10 | 37 | 42 | + | 0 | 42 |
| *Apri.* | 30 | 2 | 56 | 57 | 10 | 12 | 10 | 1 | 12 | 8 | ♋ | 3 | 12 | 20 | ♋ | 3 | 10 | 19 | — | 2 | 1 |
| *Maii* | 1 | 3 | 45 | 10 | 10 | 13 | 3 | 1 | 23 | 24 | ♋ | 15 | 23 | 32 | ♋ | 15 | 22 | 45 | — | 0 | 47 |
| | 4 | 6 | 7 | 20 | 10 | 15 | 42 | 2 | 27 | 54 | ♌ | 22 | 12 | 20 | ♌ | 22 | 14 | 2 | + | 1 | 42 |
| | 6 | 7 | 39 | 51 | 10 | 17 | 28 | 3 | 22 | 4 | ♍ | 17 | 54 | 7 | ♍ | 17 | 54 | 23 | + | 0 | 16 |
| | 7 | 8 | 26 | 33 | 10 | 18 | 21 | 4 | 4 | 39 | ♎ | 1 | 22 | 13 | ♎ | 1 | 21 | 21 | — | 0 | 52 |
| | 9 | 10 | 5 | 48 | 10 | 20 | 7 | 5 | 0 | 58 | ♎ | 29 | 49 | 15 | ♎ | 29 | 47 | 35 | — | 1 | 40 |
| | 21 | 21 | 2 | 59 | 11 | 0 | 43 | 10 | 15 | 12 | ♈ | 25 | 54 | 0 | ♈ | 25 | 51 | 50 | — | 2 | 10 |
| *Junii* | 3 | 6 | 19 | 30 | 11 | 11 | 15 | 3 | 2 | 45 | ♍ | 25 | 41 | 36 | ♍ | 25 | 40 | 0 | — | 1 | 36 |
| | 29 | 3 | 32 | 59 | 0 | 3 | 11 | 1 | 20 | 17 | ♍ | 8 | 30 | 0 | ♍ | 8 | 28 | 46 | — | 1 | 14 |
| | 30 | 4 | 16 | 26 | 0 | 4 | 3 | 2 | 2 | 4 | ♍ | 21 | 8 | 37 | ♍ | 21 | 9 | 16 | + | 0 | 39 |
| *Julii* | 1 | 5 | 1 | 10 | 0 | 4 | 55 | 2 | 14 | 12 | ♎ | 4 | 9 | 8 | ♎ | 4 | 7 | 22 | — | 1 | 46 |
| | 2 | 5 | 46 | 40 | 0 | 5 | 48 | 2 | 26 | 43 | ♎ | 17 | 28 | 18 | ♎ | 17 | 26 | 8 | — | 2 | 10 |
| | 4 | 7 | 25 | 20 | 0 | 7 | 33 | 3 | 23 | 3 | ♏ | 15 | 27 | 2 | ♏ | 15 | 23 | 30 | — | 3 | 32 |
| | 5 | 8 | 18 | 8 | 0 | 8 | 26 | 4 | 6 | 51 | ♐ | 0 | 8 | 52 | ♐ | 0 | 5 | 28 | — | 3 | 24 |
| | 6 | 9 | 16 | 10 | 0 | 9 | 19 | 4 | 21 | 2 | ♐ | 15 | 21 | 38 | ♐ | 15 | 16 | 54 | — | 4 | 44 |
| *Octo.* | 27 | 5 | 38 | 5 | 3 | 17 | 9 | 2 | 23 | 32 | ♒ | 8 | 30 | 54 | ♒ | 8 | 30 | 58 | + | 0 | 4 |
| : : | 28 | 6 | 33 | 58 | 3 | 18 | 5 | 3 | 7 | 23 | ♒ | 23 | 6 | 17 | ♒ | 23 | 5 | 37 | — | 0 | 40 |
| : : | 29 | 7 | 27 | 4 | 3 | 19 | 0 | 3 | 21 | 3 | ♓ | 7 | 33 | 10 | ♓ | 7 | 31 | 7 | — | 2 | 3 |
| *Dec.* | 26 | 6 | 36 | 30 | 5 | 11 | 8 | 3 | 9 | 12 | ♈ | 24 | 54 | 50 | ♈ | 24 | 53 | 37 | — | 1 | 13 |
| | 27 | 7 | 22 | 49 | 5 | 12 | 3 | 3 | 21 | 45 | ♉ | 8 | 18 | 37 | ♉ | 8 | 18 | 44 | + | 0 | 7 |

*FINIS.*